

AMERICAN

RAILROAD JOURNAL.

STEAM NAVIGATION, COMMERCE, MINING, MANUFACTURES.

HENRY V. POOR, *Editor.*

SATURDAY, AUGUST 23, 1856.

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NEW-YORK:

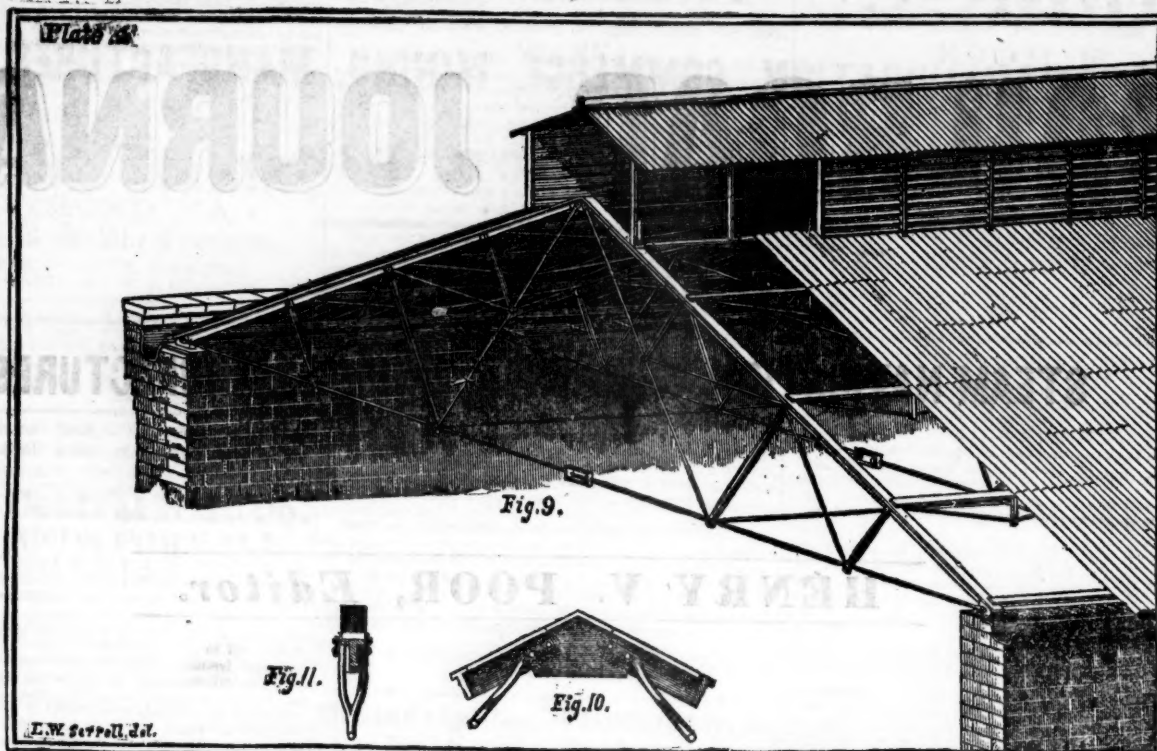
PUBLISHED WEEKLY, BY

JOHN H. SCHULTZ & CO.

Front Room, Third Floor,

No. 9 Spruce Street.

ROOFING.



THE subscribers, manufacturers and importers of PATENT GALVANIZED TINNED IRON, respectfully invite the attention of railroad companies and others interested in the construction of Fire-proof Buildings and Roofs, to this material, which is highly recommended for strength, durability, and lightness, combined with elegance in appearance. The advertisers can refer particularly to Roofs they have

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Estimates and designs for Buildings and Roofs, &c., &c.

Fig. 6.



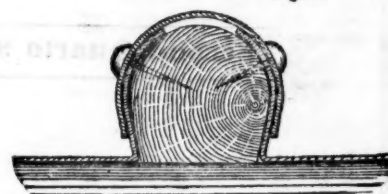
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Fig. 7.



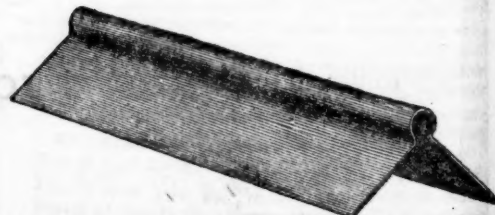
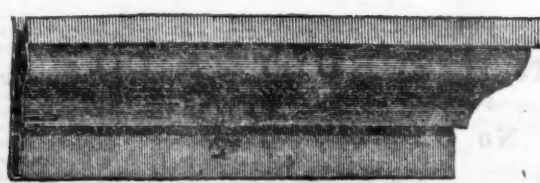
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Fig. 8.



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Galvanized Iron Cornices to any size or pattern, Ridge Caps, and Spouts.
TELEGRAPH AND FENCING WIRE, BLACK SHEET IRON SHIPS' IRON WORK,
LIGHTNING RODS, CORRUGATED. SPIKES, NAILS, &c., promptly galvanized.



MARSHALL LEFFERTS & BROTHER,
Corner of Broad and Beaver sts., NEW YORK.

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SECOND QUARTER SERIES, VOL. XII., No. 34.]

SATURDAY, AUGUST 23, 1856.

[WHOLE No. 1,062, VOL. XXIX.]

Messrs. ALGAR & STREET, No. 11 Clements Lane, Lombard Street, London, are the authorised European Agents for the Journal.

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American Railroad Journal.

PUBLISHED BY J. H. SCHULTZ & CO., No. 9 SPRUCE ST.

New York, Saturday, August 23, 1856.

Milwaukee and Horicon Railroad.

Below we give the exhibit of this company prepared to facilitate the sale of their mortgage bonds to the amount of \$450,000.

These bonds bear date May 1, 1856, are payable May 1, 1882, and are convertible into stock at the option of the holder, at any time within five years from their date, with interest of eight per cent., payable semi-annually on presentation of the coupons annexed, at the Bank of the Republic in the city of New York.

They are secured by a mortgage upon, and are a first lien upon forty-two miles of the road between its junction with the Lacrosse and Milwaukee Railroad, in the village of Horicon, in the county of Dodge, and the village of Berlin, in the county of Marquette, together with all the rolling stock, depot grounds, and all other property of the company, and by a sinking fund sufficient to extinguish the whole mortgage debt of the company before the maturity of the bonds.

On the 2d day of April, 1856, the board of directors by resolution, authorised the issuing of bonds to the amount of \$420,000, and also the execution of a mortgage upon the forty-two miles of this company's road lying between the junction thereof, with the Lacrosse and Milwaukee Railroad in the village of Horicon and the village of Berlin, and upon all the rights and franchises, real and personal estate and property thereunto belonging, said mortgage to bear date the 1st day of

April, 1856, to secure the payment of said issue and also to provide for a sinking fund to be set apart annually of \$5,000, and paid on or before the last Saturday of December in each year, for the ultimate redemption and payment of said bonds.

It will be seen by reference to the mortgage hereto appended, that the trustee of the sinking fund is required to use its avails in the purchase of the mortgage bonds of the company whenever they can be purchased at par or under, but in case they can not be purchased at par or under, then the fund is to be invested in other securities under the direction of the company. Should there be a failure on the part of the company, or neglect to make the annual deposit to the sinking fund as specified, the Trustee, Robert H. Lowry, Esq., Cashier of the Bank of the Republic in the city of New York, is authorised and directed to foreclose the mortgage in same manner as if default was made in the payment of principle or interest on said bonds, thus putting it out of the power of the company to evade this obligation.

The road is now completed to the village of Waupun, fifteen miles from its junction with the Lacrosse and Milwaukee Railroad, a point sixty-six miles North West from Milwaukee, and has been in operation since the 20th of February last. A satisfactory and irrevocable contract, running twenty years, exists for a connection of this road with the Lacrosse and Milwaukee Railroad at Horicon, under which the road has been operated since it was opened, to the mutual satisfaction of both parties. The company has expended on this forty-two miles embraced in the mortgage, about \$400,000, have fifteen miles of it in operation; the grading of the balance is now in rapid progress; has ties purchased and on hand sufficient to complete it, and sixteen hundred tons of iron purchased, which is now going forward. It has for equipment, now on the road, 3 first-class locomotives, 3 passenger and 2 baggage cars, and 80 freight cars, all of which are first-class and second to none in the country. The fifteen miles of road have earned in the three months ending May 26th, over \$12,400, which is a much larger amount in proportion to its length, than was earned by the Milwaukee and Mississippi Railroad in the corresponding months in the year 1854, the first year that road was opened to Madison—and this amount was much less than it would have been had it not been for the great fall in produce, which prevented farmers from sending their grains forward to market. The country through which this road passes is not exceeded in the fertility of the soil by any portion of our country, it is settled by an intelligent and enterprising people, and though not half developed, it is sufficiently so to support a railroad and give it business enough to pay a large dividend on its cost. At Waupun, the point to which the

road is now finished, is located the States Prison, in a flourishing village of some 1500 inhabitants. At a point eight miles from Waupun, on the line of the road, is the growing village of Brandon, where a steam flouring mill has just been constructed, and a steam saw-mill is soon to be erected for which a supply of logs is to be conveyed over this road, when completed to Berlin, on the Fox River. The next point of importance, 16 miles from Waupun and 31 from Horicon, is the village of Ripon, with a population of about 2,000—in this village is a college for learning, three flouring mills on a fine stream of never failing water, and several manufacturing establishments. This is a lovely spot, surrounded by a country of unexampled fertility, and the centre of a large and flourishing trade.

Eleven miles farther is the town of Berlin on the Fox River, with a population of some 3,000 inhabitants. This is at the head of steamboat navigation. At this place are several steam saw-mills for manufacturing pine lumber, the supply of logs being obtained from the Wolf River. This pine lumber, when the road reaches this point, will be taken over it and distributed at the various places over which it passes, for buildings and fences on the prairies and openings, and will furnish a large amount of business to the road. This is as far as it is contemplated to finish the road this year, and the means at the command of the company are to be devoted to that purpose. The company is in good credit at home, it has thus far met all its engagements promptly, and it is believed that it has the ability and vitality to continue to do it.

For the purpose of completing the forty-two miles of road mortgaged, the company have the following securities on which to raise money:

Bonds of this issue.....	\$420,000
Bonds of the town of Berlin.....	100,000
Bonds of the town of Ceresco.....	50,000
Bonds of the town of Waupun, voted, but not yet issued.....	50,000
Amount from stockholders to be paid on stock subscriptions.....	188,000
Amount of stock to be paid contractor.....	36,000
Bonds of towns and counties that will be voted when called for.....	220,000
Unperfected real estate mortgages.....	100,000
Total.....	\$1,162,000
Estimated cost of road to Berlin.....	\$840,000
Amount expended up to last report.....	354,000
Estimated amount required to complete the road to Berlin.....	486,000
Leaving an excess of.....	\$676,000

The stock basis is as follows:

Stock held on the line of the road.....	\$383,100
" " by the city of Milwaukee.....	166,000
" " to be paid contractor.....	55,100

\$604,200

And the stock books are now open; and from the success of the stock agents, thus far, the company is warranted in setting down the amount of stock subscriptions that will be added to the list this month at not less than..... 500,000

\$1,104,200

which, when completed, will make a stock basis of over a million of dollars.

Until the forty-two miles, now under contract, are completed, it is not contemplated to make any outlay in extending the road farther. The motto of the company, "Complete your road to paying points as fast as the means at command will enable you to do so, but not embarrass yourself by trying to accomplish more than prudence dictates." When the road is completed to Berlin, the next move will be for its continuation to Stevens' Point on the Wisconsin river, fifty miles farther, through a rich and fertile country, which is being filled up with inhabitants with great rapidity. When this point is reached, it will open a railroad communication with one of the most extensive lumber regions of the West. It is estimated that the lumber manufactured and run down the Wisconsin river, amounts to not less than one hundred and fifty million feet per annum. From Stevens' Point the ultimate destination of the road is Lake Superior, near Lapointe, and thus open from Milwaukee, through the centre of the State in a north-westerly direction, a railroad communication to the rich mining regions of Lake Superior. For the purpose of facilitating the continuance of this road at an early day, a bill is now pending in Congress for a grant of land to aid in its construction from Berlin to Lapointe, and there is but little or no doubt but that it will pass this session of Congress.

This road is so situated, geographically, that it will always be without competition, as no other road can be constructed to compete for the business that is justly tributary to it, without being much more circuitous and distant, besides being much more costly in construction.

That this road, when completed to Berlin, will pay largely on its cost there can be no question; and as it progresses, its proportionate earnings will be much larger, as it is a settled fact that railroads pay much better as they increase in length. All the estimates made as to the cost of this road and its earnings, at the outset, have been fully justified in every step as the work has progressed. In the first annual report of the Chief Engineer, Jesper Vliet Esq., made in December, 1854, appears the following: "An estimate of the number of acres sown to wheat and other grains in the district of country extending from three miles south of Waupun to Berlin, and within eight miles of the lines of the railroad, was made during last summer by a highly intelligent and respectable gentleman residing in that section of the country. After a careful examination, he has given it as his opinion that the number of acres sown to grains was 86,500. The amount and value of these products, at a low estimate, would be equivalent to a yield of twenty bushels of wheat per acre, or in the aggregate, to 1,700,000 bushels of wheat. Other country beyond Berlin, and outside of this tract, which will be tributary to this road, produces at least an equal amount, which, added to the foregoing, makes a sum total of 3,460,000 bushels. Deducting from this one quarter for home consumption, would leave a balance of 2,595,000. Deduct twenty per cent. of this latter amount as being directed to other channels, and 2,076,000 bushels are left for this road to carry to market. If the price received by the company for carrying this amount to market, was only eight cents per bushel, it would amount to \$166,080, which sum, after deducting

forty per cent. for operating expenses of the road, would leave a sum sufficient to pay twelve per cent., on its cost for carrying grain products only."

"No one, at all familiar with the country and the subject of railroad operations, can doubt for a moment that the receipts of the road for carrying passengers, lumber, goods, and other products of the country other than grains, will equal the amount for carrying grains. If this and the foregoing estimate be true, then we have clear net earnings amounting to 24 per cent. on the cost of the road when completed to Berlin."

The following is the estimate alluded to.

CLASSIFICATION

OF VALUE OF REAL ESTATE, ETC., IN THE FOLLOWING TOWNS ALONG THE ROUTE OF THE MILWAUKEE & HORICON R. R., IN 1854.

Name of Town.	Number of acres.	No. of acres under cultivation.	No. of acres sown with wheat and other grains.	Aver. value of land per acre.	Value of personal property and improvements.	Total value of lands and improvements.	Population.
Waupun.....	23,040	7,000	6,000	\$10	\$400,000	\$680,400	1,100
Burlington.....	14,720	8,000	7,000	12	300,000	476,640	700
Chesham.....	18,120	6,500	6,000	12	350,000	507,440	1,000
Ceresco.....	23,040	8,000	6,000	13	600,000	899,520	2,200
Berlin.....	23,480	10,000	7,000	12	600,000	941,760	650
Bushong.....	21,540	8,000	4,000	10	300,000	615,400	600
Brooklyn.....	18,560	4,500	4,000	12	350,000	572,720	1,100
Green Lake.....	25,240	10,000	6,000	14	400,000	773,360	1,100
Macford.....	22,040	6,000	6,000	12	400,000	676,480	600
Nepeshkin.....	19,840	6,500	6,500	10	300,000	498,400	600
Rosendale.....	23,040	6,000	6,500	11	375,000	628,440	700
Metmen.....	23,040	8,000	6,000	12	375,000	651,480	800
Springdale.....	23,040	6,500	6,000	10	300,000	630,400	700
Alto.....	23,040	8,000	7,000	12	300,000	676,480	700
Trenton.....	23,040	8,000	7,000	12	300,000	676,480	700
	325,820	106,000	86,500		\$5,650,000	\$9,409,320	14,450

This estimate of the amount of grains raised in 1854, was shown to be within the amount when the census of 1855 was taken. In several of the towns, the amount of grains raised the previous year was ascertained, and in every instance it verified the correctness of the estimates. Each year adds largely to the population and the amount of land under cultivation, and the products of the country are increased.

That this road is to be a very highly remunerative one, there can be no question; and the company feel confident in recommending these bonds, as not only a safe and profitable investment, but a very desirable one for capitalists. That they will be able to complete the road, and meet all engagements of every kind, they have the fullest confidence.

There is one feature in the banking law of Wisconsin that should enhance the value of this security—and that is, when the road has earned an amount net equal to eight per cent. per annum on this issue of bonds, they will be receivable by the controller, as securities for banking purposes; and as the State increases in wealth and banking capital, there will be a home demand for these bonds.

June 10th, 1856.

J. B. SMITH, President.

Flemington Railroad.

At a meeting of the Board of Directors of the Flemington Railroad and Transportation Co., held at the Trenton House, in the city of Trenton,

August 9th, 1856, Charles Bartles was elected President, and A. V. Bonnell, Secretary and Treasurer of the company.—*Hunterdon Gazette.*

Louisville and Nashville Railroad.

We copy from the *Louisville Journal* the following correspondence showing the progress of this road.

Gentlemen:—Aware of the deep solicitude felt by the citizens of Louisville, the stockholders, composed of individuals and counties, and the community generally in the progress of the Louisville and Nashville railroad and Lebanon Branch, I submit the monthly statement of the Engineer in Chief:

ENGINEER'S OFFICE L. & N. R. R.
Louisville, Aug. 7th, 1856.

JOHN L. HELM Esq., President L. & N. R. R.
Sir—I herewith submit a statement of the value of the work done during the month of July upon the main stem and upon the Lebanon branch of the Louisville and Nashville railroad; also, a statement of the force in the employ of the company on July 31st:

LEBANON BRANCH.	
Between junction and New Haven.....	\$4,283 45
Between New Haven and Lebanon.....	8,193 52
	\$12,476 97

MAIN STEM.	
First division.....	\$2,593 27
Second do.	7,277 14
Fourth do.	12,497 93
Fifth do.	11,658 18
	34,026 52

Total value of work \$46,503 49

	Men.	Horses.
Lebanon branch.....	100	30
First division (main stem).....	100	..
Second do.	330	79
Fourth do.	321	136
Fifth do.	269	130

Total force 1,120 375

Yours, respectfully,
GEO. MACLEOD, Chief Engineer.

Notwithstanding the proceeding recently had was calculated to retard the progress of the branch road, the community may feel assured that everything will be done that can be done to overcome this embarrassment and progress with the work. I think there need be no apprehensions. The whole grade will be completed in four months.

The grade is complete to Rolling Fork on the main road, and the track laid to within one-quarter of a mile of that stream. A vigorous prosecution of the work on the Rolling Fork bridge is now being made, and no doubt is now entertained that the track will cross that stream and advance one mile by or within the month of December next. By the 1st of January next, there will be one mile of Muldrow's Hill prepared for the track, and by Spring the cars may run to within seven miles of Elizabethtown. The remaining part of Muldrow's Hill may and, probably, will be prepared for the track during the winter of 1857-8.

An idea seems to prevail that the whole of Muldrow's Hill is to be tunneled. Allow me to explain the mode of overcoming this paramount difficulty in the way of the speedy progress of the road.

Muldrow's Hill is separated by Clear creek, almost to its summit; the road is laid to pass up by a side-cut on the hill for about four miles. The tunnel is through the last half-mile of the hill, and on passing out the southern entrance the road courses the valley of the creek which passes Elizabethtown on a descent of a little over twenty feet to the mile to Elizabethtown. The work on the hill will be pressed on the located line to within a short distance of the northern entrance of the tunnel. At that point, if it is thought best to make a connection with the expenditure of the \$1,000,000 under the late ordi-

nance, with a view to cross Green river at the earliest possible day with a rail-track, a temporary track round the tunnel may be adopted, with a grade which may be easily ascended by motive power, at a cost of \$5,000, losing only 150 feet in distance over the tunnel line.

The work south of the tunnel is now being pressed, and I think it may be safely assumed that the grade across Green river will be prepared for the track within the next year. Within the same period the grade will be completed through Warren and Simpson counties. If the company can negotiate for iron with its mortgage bonds, of which there exists some probability at this time, the entire line between the tunnel and State line may be fitted for iron within the next year.

The grade from Nashville out thirty miles will be prepared for the iron within the next year.

Respectfully,

JOHN L. HELM, President.

Norfolk and Petersburg Railroad.

This company was organized on the 6th of April, 1853, by the election of Dr. Francis Mallory as President. At a meeting held on the 11th of same month the company adopted by-laws and regulations for their government. On the 13th of April, 1854, the first annual report of the President, Chief Engineer, and Treasurer was submitted, from which we learn that soon after its organization, in 1853, the Board selected Wm. Mahone Esq., as Chief Engineer, and authorized him to make the requisite arrangements for the speedy and energetic prosecution of the work. Mr. Mahone had previously been in the service of the Orange and Alexandria railroad and brought with him high recommendations for professional skill and experience, affording a promise of usefulness, which his services have more than realized. Mr. Mahone proceeded at once to organize a corps of engineers for a thorough survey and location of the line between Norfolk and Petersburg. The number of roads at that time in progress throughout the Union, rendered it difficult to obtain competent assistants and to procure the necessary instruments and appliances. Consequently, the preparations were not completed till the 20th of May. The survey was immediately commenced and closed at Petersburg on the 20th of September following, covering in the aggregate of lines traced 128½ miles, and though executed with all due care and precision, was accomplished by one party of engineers, with the ordinary equipments.

From the peculiar position of the city of Norfolk, the best mode of entering it by railway required much consideration, and early engaged the attention of those to whom was entrusted the management of the affairs of the company. A careful examination of the localities was, therefore, deemed of primary importance. These having been thoroughly examined and the line projected as far as Dismal Swamp, the party of engineers, headed by the chief, took the field on the 1st of August, and on the 28th of September finished the survey to Petersburg.

The location of the road was established close on the line of the survey. The length of the road is about 80 miles, and occupies the most eligible ground the country affords. The streams are crossed at points the most favorable. The grades are light not exceeding 36.96 feet per mile. The curves are of large radii, the maximum being 7,970 and the minimum 3,143 feet. Over 73 miles are absolutely straight—this is in parcels, how-

ever, of 3, 18, and 52 miles. The road crosses the Seaboard road at or near Suffolk, and about 20 miles from Portsmouth, on an elevated plane of some 18 feet. At the city of Petersburg, it connects with the South Side railroad. Subsequent explorations, both north and south of the established line, proved the route selected to be in all respects preferable to any other; accordingly, directions were given to proceed at once with the construction of the road. Lettings were advertised on the 15th of December, bids were received for 60 miles, and contracts entered into to be commenced with the opening of the year 1854. At the date of the report, nearly the whole line was under contract.

The following is the plan of construction as laid down in the report of the Chief Engineer:—The road width has been taken at 100 feet, with such a proportion on either side as circumstances may require. The road bed will be prepared for a single track, and for sidings at stations, etc. The cuts graded for a width of twenty feet, with slopes of 1 to 1, the embankment to be not less than fourteen feet, with slopes 1½ to 1. The masonry to be generally of stone, of a kind, style and quality suited to each particular structure; but where the facilities for the delivery of stone do not exist, wooden structures will be temporarily used, to be afterwards replaced with stone. The bridges to be of the most approved style, of the best material either iron or wood. The railway track to consist of a heavy rail spiked upon white oak cross-ties, placed two feet apart, and on a layer of sand or gravel, as most convenient. The road to be ballasted upon its completion to Petersburg, this being the only point at which suitable material can be procured for that purpose.

The starting point in the immediate vicinity of Norfolk, is so situated as to afford easy ingress to several parts of the city. No steps had as yet been taken to procure iron for the superstructure. The President was of opinion that this would require attention about the latter part of the year. This road occupies a peculiar relation to the Government. The magnitude of the naval and military establishments in the vicinity of Norfolk, its central position, fine roadstead and contiguity to the West Indies, would, in case of war, make it the theatre of important movements, if not the point of attack. A communication by railway with the interior would be of immense advantage, in transporting men and supplies for distant service, or for defence at home. The connections thus formed with Richmond, Petersburg and other large cities would afford resources to the Government, which ought to be appreciated. It is worthy of notice, that while nearly every appropriation to works of internal improvement were defeated in the Virginia Legislature, during the winter of 1853-4, the Norfolk and Petersburg railroad was an exception.

In the charter the capital stock was fixed at \$800,000, which has since been increased to \$1,500,000—of this amount the State of Virginia is pledged to take \$900,000, upon condition that the remaining \$600,000 shall be made up from private sources. Of this private subscription of \$600,000, nearly \$250,000 have been taken, leaving \$350,000 yet to be made up, to ensure to the company their entire capital. If this sum can be made up

at once, the State will, under her late special enactment, issue her bonds to the company for the residue of the amount pledged by her.

The following estimate of cost of construction is either deduced from prices at which some portions of the work have already been let; or based upon prices for the material consequent thereto, which it is supposed will cover their cost, and which will only vary as such prices shall advance or recede:

For right of way.....	\$31,600.00
Clearing 623 acres.....	25,034.50
Grading 1,597,018 cubic yards earth excavation.....	302,651.70
Masonry—5,612 cubic yards culvert.....	25,775.00
“ 15,346 cubic yds. bridges.....	219,581.50
Temporary trestles and trusses.....	6,181.07
Bridging.....	74,742.00
Railway track including sidings, at \$9,350 per mile.....	803,800.00
Engineering and contingencies.....	61,679.00
	<hr/> \$1,551,294.77

Over and above this amount, equal to \$19,921.18 per mile, which covers the cost of construction proper, it will be necessary hereafter to provide for depot grounds, buildings, water stations and rolling stock, towards which there may be applied the sum of \$90,430 of the above estimate—which has been allowed therein, for the purpose of substituting masonry and iron superstructure, instead of the temporary trestles and tusses, as soon as the road shall be opened to Petersburg.

At the date of the first report, preliminary arrangements were being made for the construction of abutments of bridges over the Elizabeth river, either by the company, or by contract—to be afterwards decided.

The second annual meeting of the stockholders was held on the 12th of April, 1855. Dr. Mallory was re-elected President, and Joseph H. Robinson appointed Secretary and Treasurer, in place of G. W. Camp, resigned.

The President in his report states that during the year nothing had transpired calculated to impair the belief in the early and successful completion of the road. A large force was at work upon the road, and the more important parts were being energetically prosecuted. Proposals for rails had been invited, and several offers received, but no contract had as yet been made. The company had purchased a site for a depot at the city of Petersburg, eligibly situated, and on terms believed to be highly advantageous. From the substantial manner in which the road was being built, it was thought that but few repairs would be required for a long time after it was opened.

The Engineer in his report adheres to the original plans and estimates; and therefore only finds it necessary to refer to the progress which has been made during the year.

Of the clearing, only 180 acres—covering 15 miles of the entire line between Norfolk and Suffolk, remains to be executed. Between Suffolk and Petersburg the whole track is open.

One-third of the graduation has been completed.

The most eligible plans for the bridges over Elizabeth river, having been adopted after mature deliberation, contracts were entered into for the execution of such parts as it was deemed inexpedient for the company to undertake on its own account. A large portion of the stone for the abutments of the two bridges had been delivered.

The materials requisite for the foundations of the masonry connected with the bridges, as well as the apparatus for laying the same, had been procured. But little masonry, independent of the above bridges, has been done, beyond the construction of some culverts near Suffolk and Petersburg, and the delivery of small quantities of stone at those points for bridges in their vicinity. The entire number of cross-ties required for the road had been contracted for. No other contracts for superstructure had been made.

Bramble's Point at Suffolk has also been purchased by the company for station purposes. The Engineer proposes soon to commence here the erection of such portions of the machine shop as will be necessary on the opening of the road to be used in lieu of temporary shops for the construction of the superstructure for the Elizabeth river bridges.

The third annual meeting of the stockholders of this company was held on the 10th of April last. The report of the President and Chief Engineer, together with that of the Treasurer, was read and adopted. The following is a financial abstract of the receipts and disbursements of the company since its organization.

Capital stock	\$1,147,800.00
Received:	
From State of Virginia	\$254,562.00
" City of Norfolk	151,370.00
" Individuals	22,023.50
	427,955.50
Amount unpaid	\$719,840.50
CASH ACCOUNT.	
Received from State	\$254,562.00
" Norfolk city bonds	119,240.00
" Individuals	22,023.50
	\$395,825.50
Paid for general management, salaries and office expenses	\$18,192.93
Miscellaneous expenses	6,146.83
Engineering	38,677.27
Right of way	48,201.58
Construction	259,650.74
Equipment	6,802.00
Profit and loss account	3,509.87
	381,181.17
Balance	\$14,644.33

From the report we learn that, notwithstanding the financial difficulties with which this company has had to contend, the work of construction has steadily progressed. Much has been accomplished during the year in the way of cutting and filling, and in the construction of bridges; but a small portion of the embankment remains to be finished, and for miles together in many parts of the line, the road is in readiness for the rails. The masonry of the bridges and culverts is in good progress, and the construction of the pier in the iron bridge over the north branch of Elizabeth river is in a state of forwardness. The stone for the bridge over the eastern branch has been contracted for and is being delivered as fast as required. The bridge over the Nansemond river is in an advanced stage. These bridges are all so far advanced that, with adequate means, they could be completed in a very short time.

The amount of work which has been done in the clearing, graduation and masonry is valued at \$283,848.07; and the completion of all these, including the screw pile piers of South Branch

bridge is estimated at \$308,000. There has been paid on account of work done, \$259,650.74—the usual reservation being made, as security for the faithful compliance with the contracts. Of the amount paid, \$85,000 has been in Norfolk city scrip, at the rate of 90 cents to the dollar. In the payment of the reservation, and for the work which remains to be done, amounting together to \$283,697.33, it is the intention of the Company to use \$65,000 more of the same scrip at the same valuation. The cross-ties for the entire road will cost about \$77,000. They are all to be delivered during the present year. One half of the sum to be paid in city scrip, at 90 cents on the dollar, or in cash at the option of the company. In depot grounds, station buildings, and the like, nothing has been done since the last report. As to the final cost of the road, the engineer finds no reason to demur from his original opinion upon the subject, except so far as it applies to right of way, which will exceed his estimate about \$35,000.—The estimate for engineering and contingencies is also largely augmented, from the greater length of time required to complete the road than originally contemplated. The liabilities of the company under all existing contracts are:

For right of way unsettled	\$16,000
Clearing, graduation and masonry	258,000
Cross-ties	77,000
	\$351,000

The officers of this company are—Francis Mallory, President; J. J. Simpkins, Secretary and Treasurer; Wm. Mahone, Chief Engineer. Directors on the part of the State, A. F. Leonard, Geo. W. Camp, John B. Whitehead; on the part of the stockholders, W. G. Harrison, W. J. Hardy.

Baltimore and Ohio Railroad.

The Board of Directors of the Baltimore and Ohio railroad company held their regular monthly meeting on the 14th inst. The usual official statement of the operations of the road during the month of July was made to the meeting, and exhibits the following result:

	Main Stem.	Wash. Br.	Total both roads.
For passengers	\$63,265.46	\$29,370.87	\$92,636.33
For freight	317,579.36	7,756.28	325,335.64

Total \$380,844.82 \$37,127.15 \$417,971.97

These figures, compared with the receipts for July of last year, show that on the main stem there is now an increase from passengers of \$11,991.67, and from freight of \$98,003.19; while on the Washington Branch there is an increase from passengers of \$4,645.01, and from freight of \$1,422.89;—total increase for the month, \$116,062.76. The following table exhibits the monthly receipts during the past ten months of the fiscal years, from which it will be seen that there has been a gain of \$576,882.16 over the corresponding period of last year:

	1855.	1854.
October	\$423,436.84	\$359,610.52
November	399,119.40	347,577.96
December	441,315.61	293,014.16
	1855.	1854.
January	\$191,809.81	\$370,211.98
February	211,513.76	216,299.49
March	405,820.39	370,455.02
April	551,811.28	368,202.84
May	479,418.25	385,358.14
June	438,788.26	371,783.84
July	417,971.97	301,909.21

Total

Increase

The Tehuantepec Route.

The Tehuantepec Company of this city have issued the following interesting statement of the condition, prospects and value of this great work:

It was much needed for the information of the public. The interest in this route is received with great force, and the circumstances of the country give it additional attraction.

We have been almost on the verge of a war with Great Britain, of which the real cause is the struggle for a free transit across the Isthmus, a communication not subject to the control or caprice of any foreign power, between the Atlantic and Pacific States of the Union. The affairs of Central America, which so much perplex our statesmen, and have so much involved us in controversy with foreign nations, that war, at several times, has been thought to be imminent, concern us mainly because through these States lie the chief routes by which it has been supposed that the commerce of the world could be made to pass from ocean to ocean. The United States, as the dominant power on this continent, with an immense commerce in both hemispheres, seeking vent by this channel, and requiring as a political necessity a quick and safe communication between its own ports, would not consent that any European nation should have influence or military stations by which it can block up the way or control the passage through, in either direction.

There is no settlement yet of the Central American difficulties, brought on by our efforts to abolish the predominance of England in the Caribbean sea, and secure, by compact with her, the neutrality of the Isthmus routes. The best settlement which can be expected amounts only to a truce—a mutual agreement to abstain from monopoly or interference; but it is obvious that all such agreements, however permanent they may be in their terms, have in them the elements of instability, and are subject to changes and chances which depend on the caprice of either government, or the changing circumstances and humors of the States of the Isthmus through which the guaranteed routes must pass. The distance from our own borders of the nearest of these routes adds to the burden of the uncertainty which must also exist in regard to the management of these transit routes, and the good faith with which the pledged neutrality is observed; and a costly establishment of naval observation must always be kept up. If these were the best, or the only routes, these burdens would be cheerfully borne with; for a transit free and sure, at all times to citizens of the United States, must be maintained at all hazards and cost—almost as a condition of the coherence together of the Atlantic and Pacific States of the Union.

The route via Tehuantepec disposes of a great many of these embarrassments, and takes the substance out of the quarrels with England about the Central American routes. Securing the Tehuantepec line and opening a road there, we have lost the paramount interest which we had in defeating the British attempt at monopoly below, and the British lost the inducement to insist upon keeping the points which are only useful to her for military and naval stations, to command the termini of the inter-oceanic canals or railroads. The dispute will thus have lost its importance, and there can be no difficulty in compromising details that have no real signification. If our people turn their eyes and their interests to the Tehuantepec improvement—the Central American—they will go the straight and short way to prevent Great Britain from caring any more about her pretensions, or from entertaining any designs to our prejudice at Nicaragua or Panama, or any other projected transit route.

The political advantage is resultant upon the intrinsic superiority of the route over all others, for the general commerce of the world, and its peculiar and immense value to the United States.—These views are very well and lucidly expressed in the circular which we copy below, and to which we invite the attention of our readers. Those who have any special interest in New Orleans, who de-

sure its prosperity, and wish to see it grow rapidly and largely in trade, population and wealth, will find in these statements ample inducements to put their own hands to the work, and assist, by their means, in bringing it to an early consummation. No enterprise presented to the public combines such great promise of public benefits, with such prospects of profit to the capitalists who shall take it in hand:

CIRCULAR.

NEW ORLEANS, July 24, 1856.

Sir—The Tehuantepec Company, established in New Orleans, possess the right of way over the Isthmus of Tehuantepec, granted by the government of Mexico, on the 8th of February, 1853, as well as the exclusive navigation of the Coatzacoalcos river.

This grant is recognized and protected by the government of the United States, in the eighth article of the Gadsden treaty, ratified on the 30th of June, 1854.

The value of this recognition may be estimated by the following extract from a letter from Hon. A. Dudley Mann, late Assistant Secretary of State, to the writer, dated London, October 4, 1855:—"If the road shall be made, the recognition of the route by the government of the United States will be of incalculable value. Such a recognition could not be obtained again for any consideration. Neither the Executive nor the Senate could be influenced to give its assent to it, and without it the contract would be comparatively worthless, as is manifest in the instance of the Garay grant. Mexico is restrained by obligations which it would be worth her peace to disregard, to repudiate the Sloo contract, while she abrogated with impunity that of Garay. The Sloo contract is, therefore, the only one that it is likely ever could be enforced in Mexico. The United States government most assuredly will never commit itself to another. Indeed, its policy with respect to American citizens engaged in enterprises or trade in foreign countries, is almost certain to be different from what it has been heretofore. Those who establish themselves abroad in business pursuits must look to the tribunals of the country in which they are located for redress, since they employ their capital in developing the resources and contributing to the wealth of that country. In this view of the matter, the Sloo contract is worth millions of dollars, because it is protected by the United States."

A mere glance at the map will convince the most sceptical that the Tehuantepec route must command all the commerce on the Pacific Ocean with the United States and Europe. By it New Orleans will be brought within 3,000 miles and ten days' travel of San Francisco; and passengers, by means of the railroads now in construction, will be conveyed thence to New York in thirteen days.

At the same time that New Orleans will by this route, be gaining 2,100 miles over that by Panama, which is the present highway, New York herself will make a saving of distance by sea of 1,160 miles, and thus be forced to use our road. The gain in passage from Liverpool by the Isthmus of Tehuantepec, over that by the Panama road to China, is 2,200 miles in distance, and ten days in time. With these advantages the route by Tehuantepec must command the whole China trade.

Our route is considered a link in the great chain of communication between Great Britain and Australia, and a project is now on foot to run a line of steamers to Norfolk, and thence by the railroads of the United States and the Isthmus of Tehuantepec, to Australia. When this line goes into operation it will at once double all our revenues, as the trade of Australia, with its fifty millions of gold, bears the same relation to Great Britain as the trade of California does to the United States.

A few years since the French government sent out a distinguished engineer, Monsieur Emilie Chevalier, to examine all the communications between the two oceans. He made an elaborate report on Panama and Nicaragua, and wound up in these words: "But if hereafter the other ways

of communication, and conspicuously that which traverses the Isthmus of Tehuantepec, should pass from a state of project into one of execution, it is certain the Panama railroad would be abandoned by all travellers going either from the Atlantic States or Europe to California and reciprocally. This road would only preserve the South American trade, which is now so feeble that it would have to increase tenfold before the receipts of the railroad would arrive at a reasonable sum." (See "Annals du Commerce Extérieur," Feb. 1852.)

This opinion was confirmed and reiterated by the Geographical Society of Paris, after a detailed examination of all the authorities. (See "Bulletin de la Société de Géographie," July, 1852.)

For the present it is intended to run light draught steamers on the Coatzacoalcos river, a distance by the river of seventy-five miles, to Suchil, the head of navigation, and thence to open a carriage road for a distance of about 100 miles to the Pacific ocean. As a considerable part of this carriage road is already constructed, and from thirty to forty miles on the Pacific slope is prairie, requiring but little labor, the remainder being over a country "whose peculiar formation," to use the words of Mr. Avery, who made the survey, "is remarkably well adapted to the construction of good roads;" it is believed it can be completed in a short time, and at a small expense.

Our route has the advantage of unquestioned salubrity, and of passing through one of the most beautiful and picturesque countries that exists on the surface of the globe.

All the conditions of the grant have been punctually and faithfully complied with. The company made a contract with Sykes & Co., of Sheffield, England, who are contractors of some importance in Canada, for the construction of both the carriage and railroads. The work was commenced by them, and some five or six miles of road opened. James Sykes unfortunately embarked on board the Arctic, with his principal men, intending to push the work through vigorously, when they became victims of the catastrophe that befell that vessel.

It is difficult to estimate the probable revenue of this road without producing a sum that borders on the fabulous. Major Barnard, in his report, page 121, says: Taking 1849, '50 and '51 as the criterion, the lowest annual estimate of emigration between the Atlantic States and California is 141,320. Now, calculating the passengers at 50,000 only per annum, at \$25 per head, the price now paid over Panama; the freight at but thirty tons per day, and the mail pay and gold at the same proportionate rate as is now received by the Panama road, its revenues would exceed two millions of dollars per annum, after deducting \$900,000 for expenses. This sum will build the railroad in three years. If the steam transportation be undertaken by the company, at the rates now paid to other lines, this revenue will be much more than doubled. No one would have the temerity to estimate the profits of the railroad.

These are some of the advantages possessed by the route across the Isthmus of Tehuantepec over all its competitors.

It is peculiarly the Southern route, and it will concentrate in the ports of the Gulf of Mexico the whole trade of the Pacific Ocean, the Indies and Australia, and those ports the grand depots of all the commerce of the East. It is the conviction of this fact that has caused the whole moneyed interest of New York to combat with a fury hitherto unknown every effort to open this road. An attempt was made to prevent Sykes & Co. from performing their contract, by bribery; and the same means were tried on Smith, the present contractor. The recent attempt of Hargous and his party, which has been so signally defeated by the government of the United States, originated from the same cause, and was instigated by the same men.

At length the people of New Orleans have awakened to the immense importance of this route, and money sufficient to open, immediately the carriage road has been subscribed. It is to be hoped that the same good feeling will continue, and that the capital necessary for the establish-

ment of the steam transportation, and for all other purposes of the company, will be supplied at the South; and that for once she will be true to her own interests, and secure all the pecuniary as well as the political and moral advantages the accomplishment of this great enterprise will achieve.

There is nothing that will so completely render the South independent of the North, and bring her in intimate and close connection with our Pacific possessions as the command of the Isthmus of Tehuantepec.

All that is required to accomplish every purpose of the company is two millions of dollars, and it can be shown to an arithmetical certainty that the revenue derived from that investment will be greater than can be obtained from any other known enterprise.

The company have sent down a light draught steamer to navigate the Coatzacoalcos river, and a vessel has also been dispatched laden with supplies and men; there is sufficient native labor on the ground to vigorously prosecute the work, and as the whole population of the country anticipate its accomplishment with enthusiasm, it will not only be done, but be done well and speedily.

Inviting your active co-operation, I am, respectfully, your obedient servant,

WALTER NICOL,

President Tehuantepec Company.

M. ABRAMS, Secretary.

Iron Mountain and Wisconsin Railroad.

The Lake Superior Journal says that a company has been organized under the provisions of the general railroad law of the State of Michigan, called the Iron Mountain and Wisconsin Railroad Company, and have filed their articles of association in the office of the Secretary of State.

The line of the road of this company extends from the present western terminus of the Iron Mountain Railroad Company—twenty miles west of Marquette, in a south-westerly direction, crossing the Michigan river, and thence descending the valley of that stream, to the Wisconsin State line, striking the Menominee river, near the mouth of the Brule, in township forty-one, of range thirty-two. At the Menominee it meets the line of road extending from Fon du Lac, on Winnebago lake, by way of Appleton, to the north boundary line of Wisconsin, thus forming an unbroken connection from Chicago to Marquette, on Lake Superior.

The route, we understand, is one quite favorable for the construction of a road. The line has already been surveyed and located by the engineer of the company, Austin Burt, Esq., and the map of the route filed in the Register's office of Marquette county. The company have been fortunate in the selection of this gentleman as their engineer, as he is thoroughly acquainted with the country, and possesses an intimate topographical knowledge of the district through which the road passes.

The names of the corporators of the company are: Heman B. Ely, Austin Burt, John Burt, Hubbard Wells, Charles D. Welles and Sands G. Cole, of Marquette; and Jonathan Child, Lewis M. Morgan, Wm. H. Perkins, Samuel P. Ely, George H. Ely, C. F. Smith, G. H. Perkins, Chester P. Dewey, John N. Pomroy, H. A. Brewster, Aristarchus Champion, Alvah Strong, Thomas Kempshall, J. H. Child, S. L. Brewster, Henry F. Smith, Porter Taylor, Robert Gelding and Henry Fowler, of New York. We recognize among these names many well known to the public as men of capital, enterprise and experience; and to whom the Upper Peninsula is already much indebted in her onward march of improvement; and we have no hesitation in declaring that the work is in safe hands; and if other portions of the line are completed as soon as this will be, the next two years will find us in daily communication, by railroad, with our neighbors of Appleton, Fon du Lac, Milwaukee and Chicago.

Railway Share List.

Compiled from the latest returns—corrected every Wednesday—on a par valuation of \$100.

NAME OF COMPANY.	Length of Road.	Capital paid in.	Debt.	Total cost of road & equip't.	Gross Earnings for last official year.	Net Earnings for do.	Dividend for do.	Price of Shares.	NAME OF COMPANY.	Length of Road.	Capital paid in.	Debt.	Total cost of road & equip't.	Gross Earnings for last official year.	Net Earnings for do.	Dividend for do.	Price of Shares.
Atlantic & St. Lawrence	149	1,538,100	2,973,700	6,019,929	470,547	110,247	6	65	Brunswick and Florida, Ga.	30	300,000	300,000	550,000	In progr.			
Androskog. & Kennebec	56	589,042	1,622,905	2,210,947	209,475	110,247	none	14	South Western	92	1,097,490	465,500	1,524,920	258,366	141,168	8	
Kennebec & Portland	56	1,114,725	1,661,236	2,470,800					Tennessee and Alabama	30	248,456		679,906	In progr.			
Portl. Soc. & Portm'th	51	1,367,000	119,237	1,486,237	270,214	112,891	6	86	Tennessee and Mississ.		170,931		176,340	In progr.			
Boston, Conn. & Montreal	98	1,808,993	1,060,512	2,771,510	253,234	120,884			Memphis and Charleston	217	2,179,440	2,127,002	4,028,799	311,651	159,572		
Cheshire	53	2,085,925	899,313	3,179,637	380,221	143,656	2		Mobile and Ohio	163	2,568,555	1,802,921	4,536,412	199,932	109,236		
Concord	35	1,600,000	8,242	1,412,576	330,949	136,454	2	75	Mobile Central	188	642,534	none	628,303	In progr.			
Northern, N. H.	82	2,768,400	none	3,016,633	370,529	138,299	2	40	N.O., Opelousas & G.W.	55	2,930,428	671,645	2,657,566	In progr.			
Con't. & Passumps. Riv.	61	1,048,145	787,608	1,790,062	162,687	56,173	none		Vicksburg, Shreveport & Tex.		111,750	none	107,895	In progr.			
Rutland & Burlington	120	2,238,376	2,662,396	5,878,428	394,971		none		East Tennessee and Ga.	111	1,000,000	1,500,000	2,500,000	In progr.			
Vermont Central	117	5,000,000	3,560,236	8,463,366	820,119	214,793	none	1	East Tennessee and Va.	16	625,425	938,593	1,033,781	In progr.			
Boston and Lowell	27	1,830,000	325,635	2,188,595	489,754	140,377	6	69	Nash. and Chattanooga	161	2,319,330	1,497,051	3,843,094	316,090	112,777	none	
Boston and Maine	83	4,076,974	160,000	4,179,436	484,426	330,000	6	75	Covington & Lexington	96	1,302,804	2,235,939	3,738,753	264,978	132,694	18	
Boston and N.Y. Central	74	2,240,300	1,518,671	3,463,418	69,917	210,689	none	61	Lexington and Frankfort	29	430,056	158,099	637,071	93,263	43,636	6	
Boston and Providence	45	3,180,000	859,132	3,677,154	558,671	404,681	none	82	Lexington and Danville		694,444	82,734	747,178	In progr.			
Boston and Worcester	68	4,600,000	955,428	4,865,419	1,008,004	404,681	6	49	Louisville and Frankfort	65	698,236	609,051	1,659,506	244,014	96,902		
Cape Cod	47	681,690	280,598	997,352	119,221	65,527	3	47	Atlantic & Gt. Western	254	866,939	77,294	913,231	In progr.			
Connecticut River	52	1,691,119	273,241	1,902,244	280,650	108,787	5	47	Bellefontaine and Ind.	118	1,881,635	2,025,925	2,852,652	298,293	140,823	none	
Eastern, Mass.	60	2,583,400	2,947,737	4,621,016	647,281	305,998	40	40	Ohio, Col. and Cin.	141	4,647,020	1,222,857	4,613,722	1,290,236	732,066	9	101
Fitchburg	107	3,540,000	158,700	3,766,368	651,163	225,071	none		Cleveland and Toledo	200	2,676,428	2,089,301	5,124,029	786,272	398,986	10	72
North-Eastern	30	800,242	235,586	968,821	In progr.				Clev. and Mahoning	103			628,633	In progr.			
N. Bedford and Taunton	21	600,000	none	635,953	198,491	65,633	6	63	Clev. and Pittsburg	133	2,750,744	3,043,992	5,637,466	581,877	309,513	67	
Old Col'y and Fall River	57	3,015,100	292,650	3,362,949	653,499	295,738	6	63	Cin. Hamilton & Dayton	60	2,155,900	1,321,213	2,987,757	508,271	278,012	65	
Vermont and Mass.	77	2,232,641	1,033,670	3,269,727	258,726	87,313	7	87	Cin. Wilm. & Zanesville	131	1,120,450	1,131,266	2,326,455	148,739	95,366	18	82
Western, Mass.	166	5,150,000	5,966,420	10,495,905	1,869,678	76,760	2	70	Columbus and Xenia	66	1,484,550	149,000	1,481,733	956,366	187,515	10	
Worcester and Nashua	46	1,141,000	206,565	1,361,271	290,730	138,057	10	22	Dayton, Xen. & Belpre	63	437,838	423,668	860,496	In progr.			
Providence and Worcester	43	1,510,000	686,461	1,806,093	311,430	138,057	10	22	Dayton and Michigan	140	1,076,002	393,011	1,185,826	In progr.			
Hartford and N. Haven	72	2,350,000	939,000	3,315,002	370,012	186,799	10	22	Dayton and Western	35	310,000	500,000	733,769	In progr.			
Hart'd, Prov. and Fishkill	122	2,008,110	2,090,695	4,099,369	258,685	119,611	none		Easton and Hamilton	45	454,690	904,458	1,155,135	171,929	65,000	20	
Housatonic	110	2,000,000	414,240	2,431,773	339,196	171,427	none		Little Miami	65	2,933,921	1,717,785	3,648,172	681,562	336,708	83	
Naugatuck	57	1,031,800	524,244	1,556,723	230,459	93,768	none		Mad River and L. Erie	205	2,451,650	2,572,932	4,446,661	In progr.			
N. York and N. Haven	62	3,033,000	2,876,808	5,976,808	884,306	338,377	none	25	Central Ohio	138	1,520,927	3,435,076	4,283,443	Recently opened.	none		
N. Haven and N. London	50	738,265	735,166	1,450,318	124,004	30,318	none		Ohio and Penn.	187	2,851,700	5,670,700	1,111,626	662,117	9		
N. London, W. & Palmer	66	509,200	1,073,673	1,594,358	188,044	66,430	none		Pittsburg, Mayfield & Oh.	50	371,350	81,000	390,933	In progr.			
Norwich and Worcester	68	2,122,800	873,486	2,997,158	304,236	88,458	2	25	Sand'y, Mans. & Newk.	127	1,350,000	2,206,357	3,652,357	328,958	164,479	none	
Albany Northern	32	439,005	1,625,098	1,840,695	117,718	9,904	none		Scioto & Hocking Valley	135	405,975	690,650	888,858	In progr.			
Black River and Utica	35	643,530	617,859	974,823	In progr.				Spring Mt. Vernon & R.	113	1,000,000	960,000	In progr.				
Buffalo, Conn. and N. Y.	100	1,487,871	1,601,182	2,819,096	172,476	64,383	none		Tol. Wabash & St. Louis	242	2,500,000	4,580,000	In progr.				
Buffalo and N. Y. City	92	795,439	2,637,849	3,401,868	298,392	31,896	none		Cin. Log. and Chicago	242	4,196,679	1,066,125	2,080,433	In progr.			
Buffalo and St. Line	69	1,800,000	1,040,000	2,494,364	67,750	355,763	10		Evansville & Crawfordsv.	109	706,945	1,777,995	1,844,541	127,400	64,552		
Canandaigua and Elmira	47	434,111	2,273,393	1,275,796	174,089	69,506	none		Ind. and Cincinnati	88	1,213,723	1,462,859	2,178,461	356,012	193,142	7	60
Canandaigua & Niagara F's	98	1,515,000	2,273,393	3,495,832	185,438	48,640	none		Indiana Central	66	611,400	1,261,179	1,907,911	860,176	134,375	60	
Cayuga & Susquehanna	86	687,000	508,689	1,187,562	132,439	48,640	none		Ind., Clev. & Pittsburg	83	826,525	1,099,400	1,831,225	228,058	95,010	none	
Hudson River	144	3,765,436	9,250,362	12,737,898	1,812,087	603,946	none	29	Jeffersonville	66	1,014,262	694,000	206,644	94,318	none		
Long Island	96	1,876,148	968,049	2,555,936	301,793	116,462	none	26	Madison and Indianapolis	87	1,647,700	1,386,816	1,205,000	286,146	112,890	none	
New York Central	694	24,154,380	14,462,742	28,523,913	6,668,581	1,021,126	8	99	New Albany and Salem	288	2,835,121	5,881,848	6,648,189	645,827	371,402	none	
New York and Erie	464	10,023,958	25,128,669	38,439,431	1,488,998	2,327,118	none	56	Perry and Indianapolis	73	571,300	658,314	150,000	90,000	none	16	
New York and Harlem	138	6,637,111	4,069,769	7,756,203	1,085,577	234,126	none	15	Terre Haute and Ind.	73	974,800	604,355	1,502,166	287,512	198,702	10	
Northern, N. Y.	113	1,633,022	4,406,874	5,470,714	620,163	135,764	none	1	Chicago and Rock Is'd	182	3,141,500	2,387,155	6,214,152	In progr.			
Oswego and Syracuse	35	399,000	216,681	723,683	120,540	59,092	3		Chicago and St. Louis	220			1,077,312	In progr.			
Pottsdam and Watertown	25	467,200	294,189	749,683	In progr.				Chicago, Burl. and Quincy	59	1,639,100	1,684,736	2,884,622	722,580	379,821	20	
Rensselaer & Saratoga	48	500,000	395,600	719,909	21,089	none			Central Military Tract	85	1,202,500	2,133,050	2,920,221	471,399	219,588		
Saratoga and Whitehall	80	768,369	1,578,804	2,272,777	159,484	22,503	none		Chic. St. Paul & F'd du Lac	178	2,300,000	1,325,000	3,625,000	In progr.			
Syracuse & Bingham'n	27	487,830	787,079	1,109,822	156,363	55,184	3		Galena and Chicago	259	5,441,500	3,318,039	7,742,614	2,318,786	1,192,042	22	107
Troy and Boston	97	1,370,878	709,979	2,088,063	404,374	172,474	3		Illinois Central	627	2,271,050	19,416,392	20,374,446	1,622,118	527,952	109	
Watertown and Rome	64	1,000,000	1,619,000	2,619,000	161,555	75,534	none		Peoria and Quawwa	93	569,889	818,454	1,388,342	In progr.			
Belvidere Delaware	94	8,000,000	11,407,200	8,636,532	2,017,127	961,941	12	125	Ohio & Miss. (Wat. Div.)	147	1,780,295	2,292,403	4,870,586	Recently opened.			
Camden and Amboy	60	389,820	1,622,131	1,729,462	122,417	50,080	none		Terre Haute and Alton	173	2,281,420	1,256,000	3,537,424	In progr.			
Camden and Atlantic	30	3,482,850	690,000	4,310,011	861,514	500,740	10	118	Detroit and Milwaukee	185	838,000	1,129,964	1,966,960	In progr.			
New Jersey	63	2,000,000	2,266,176	3,683,149	383,728	171,603	none		Mich. Central	282	6,032,444	9,099,013	10,698,155	2,215,283	579,656	10	89
New Jersey Central	53	1,157,805	876,000	1,636,550	229,341	96,267	6		Mich. South'n & N. Ind.	475	6,928,900	6,319,224	11,645,208	2,410,000	875,000	10	87
Morris and Essex	44	1,037,867	842,564	1,988,317	Recently opened.				Green Bay, Mil. & Ch.	165	764,075	442,726	1,193,766	In progr.			
Albany Valley	63	1,700,000	1,940,000	3,640,000	919,253	52,450	none		Milwaukee and Miss.	108	1,826,423	2,467,839	3,578,757	691,843	417,443	17	77
Cataw. W. & Erie	56	1,099,500	12,211	1,011,333	146,381	66,994	none		Milwaukee & Water'n	72	854,861	132,000	614,258	In progr.			
Cumberland Valley	109	3,051,622	3,894,702	6,022,667	528,911	259,263	6		Milwaukee and Horicon	15	554,200		354,100	In progr.			
Del. Lack. & Western	33	600,000	150,000	750,000			10		Milwaukee & La Crosse	51	1,351,832	532,131	1,883,968	In progr.			
Del. and North East	28	2,606,100	546,222	3,407,651	353,301	255,930	9		Racine and Miss.	47	921,068	380,716	1,289				

Railroad Bonds.

NAMES OF COMPANIES. (The following quotations are at interest.)	Amount of Loan.	Description of Bonds.	Rate Int.	Interest payable.	Where payable.	Due.	Offered.	Asked.
Alabama and Tennessee River	\$838,000	1st mortgage, convertible	7	1st Jan. 1st July	N.Y.	1872	85	85
Buffalo and State Line	500,000	Do. convertible	7	April, October	"	1886	97 1/2	97 1/2
Bellefontaine and Indiana	600,000	Do. convertible	7	Jan'y, July	"	1886	85	85
Do. do.	200,000	Real estate, convertible	7	Jan'y, July	"	1886	85	85
Do. do.	200,000	Income, guar. Cl. Col. & Cin.	7	Feb'y, August	"	1869	82 1/2	85
Central Ohio	1,250,000	1st mort. conv. east. sec.	7	Divers	"	1861-64	82 1/2	85
Do. do.	800,000	2d do. convertible	7	March, Sept.	"	1869	70 1/2	75
Cincinnati, Hamilton, and Dayton	500,000	1st mortgage, convertible	7	20 Jan. 20 July	"	1867	91	91
Do. do.	465,000	2d do. do.	7	May, Novemb.	"	1880	80 1/2	84
Cincinnati and Marietta	2,500,000	1st mortgage, conv. till 1862	7	Jan'y, July	"	1868	72 1/2	77 1/2
Cincinnati, Wilmington, and Zanesville	1,300,000	Do. convertible	7	May, Novemb.	"	1862	85	85
Cleveland, Painesville, and Ashtabula	567,000	Do. convertible	7	Feb'y, August	"	1861	91	95
Cleveland and Pittsburgh	800,000	Do. convertible	7	Feb'y, August	"	1860	93	93
Do. do.	1,200,000	Do. on branches	7	March, Sept.	"	1873	75	78
Cleveland and Toledo	525,000	Do. convertible	7	Feb'y, August	"	1863	87	87
Chicago and Mississippi	800,000	Do. conv. till 1857	7	April, October	"	1862-72	80	83
Do. do.	1,200,000	Do. convertible	7	April, October	"	1862-72	80	80
Covington and Lexington	400,000	Do. do.	6	April, October	"	1867	75	75
Do. do.	1,000,000	2d mortgage, convertible	7	March, Sept.	"	1863	65	100
Delaware, Lackawanna, and Western	1,500,000	1st mortgage, do.	7	April, October	"	1875	91	100
Fort Wayne and Chicago	1,250,000	Do. conv. till 1863	7	Jan'y, July	"	1873	80	80
Galena and Chicago	2,000,000	Do. convertible	7	Feb'y, August	"	1863	94	95
Do. do.	2,000,000	2d mortgage, do.	7	May, Novemb.	"	1875	87	88 1/2
Great Western (Illinois)	1,000,000	1st mortgage, do.	10	April, October	"	1868	87	90
Green Bay, Milwaukee, and Chicago	400,000	Do. convertible	8	10 April, 10 Oct.	"	1863	93	95
Jeffersonville	300,000	Do. 2d sec. inconv.	7	April, October	"	1873	75	75
Indiana Central	600,000	Do. convertible	7	May, Novemb.	"	1866	90	90
Indianapolis and Bellefontaine	450,000	Do. do.	7	Jan'y, July	"	1860-61	79	81
Indianapolis & Ohio (for Lawb. & U.M.)	500,000	Do. conv. till 1857	7	March, Sept.	"	1866	85	85
La Crosse and Milwaukee	950,000	1st mort. 1st sec. conv. till 1864	8	May, Novemb.	"	1874	84	85
Lake Erie, Wabash, and St. Louis	3,400,000	1st mortgage, conv. till 1869	7	Feb'y, August	"	1865	70	72 1/2
Little Miami	1,500,000	Do. inconv.	6	2 May, 2 Nov.	"	1883	80	81
Michigan Central	1,000,000	No mortgage, convertible	6	April, October	Bost.	1860	100 1/2	101
Do. do.	600,000	Do. do.	6	March, Sept.	"	1869	102 1/2	102 1/2
Milwaukee and Mississippi	600,000	1st mort. 1st sec. conv. till 1867	9	Jan'y, July	N.Y.	1862	95	95 1/2
Do. do.	650,000	Do. 2d do. 1868	9	April, October	"	1863	95	95
Do. do.	1,250,000	Do. 3d do. 1860	9	June, Decemb.	"	1877	88 1/2	89 1/2
New Albany and Salem	500,000	Do. 1st section	10	April, October	"	1868-62	85	85
Do. do.	2,325,000	Do. oth. sec. con. till 1868	8	May, Novemb.	"	1864-75	85	85
Northern Cross	1,200,000	1st mortgage, convertible	8	Jan'y, July	"	1873	95	95
Ohio and Indiana	1,000,000	Do. do.	7	Feb'y, August	"	1867	90	90
Ohio and Pennsylvania	1,750,000	Do. do.	7	Jan'y, July	"	1866-66	95	95
Do. do.	2,000,000	Income, convertible	7	April, October	"	1872	75 1/2	79 1/2
Pennsylvania (Central)	5,000,000	1st mortgage, conv. till 1860	6	Jan'y, July	Phila.	1880	98	98
Racine and Mississippi	680,000	Do. conv. sink'g f'd	8	Feb'y, August	N.Y.	1876	85	85
Scioto and Hooking Valley	300,000	Do. 1st sec. conv.	7	May, Novemb.	"	1861	85	85
Steubenville and Indiana	1,500,000	Do. convertible	7	Jan'y, July	"	1865	80	80
Terre Haute and Indianapolis	600,000	Do. do.	7	March, Sept.	"	1866	95	100
Terre Haute and Alto	1,000,000	Do. do.	7	Feb'y, August	"	1862-72	78	79
Do. do.	2,000,000	2d do. do.	8	Feb'y, August	"	1870	72	73

NAMES OF COMPANIES. (The following quotations include the accrued interest.)	Amount of Loan.	Description of Bonds.	Rate Int.	Interest payable.	Where payable.	Due.	Offered.	Asked.
Baltimore and Ohio	2,500,000	Mortgage	6	April, October	Balt.	1885	86	86 1/2
Do. do.	1,128,500	Do.	6	Jan'y, July	Balt.	1875	87	89
Chicago and Rock Island	2,000,000	1st mortgage, conv. till 1858	7	10 Jan. 10 July	N.Y.	1870	90	93
Erie Railroad	3,000,000	1st mortgage	7	May, Novemb.	"	1867	104 1/2	106 1/2
Do. do.	4,000,000	2d mortgage, convertible	7	March, Sept.	"	1859	98	98 1/2
Do. do.	6,000,000	3d mortgage	7	March, Sept.	"	1883	98 1/2	99 1/2
Do. do.	4,000,000	Not conv. Sink Fund, \$420,000	7	Feb'y, August	"	1875	92	92 1/2
Do. do.	4,251,000	Convertible, Inscription	7	Feb'y, August	"	1871	86 1/2	87
Do. do.	3,500,000	Convertible	7	Jan'y, July	"	1862	91 1/2	92 1/2
Hudson River	4,000,000	1st mortgage, Inscription	7	Feb'y, August	"	1869-70	99 1/2	100
Do. do.	2,000,000	2d do. do.	7	16 June, 16 Dec.	"	1860	87 1/2	89 1/2
Do. do.	3,000,000	3d do. convertible	7	May, Novemb.	"	1870	96 1/2	98
Illinois Central	17,000,000	Mortgage, inconvertible	7	April, October	"	1875	90 1/2	91
Do. (Free Land)	3,000,000	Mfg 345,000 acrs-priv. 7 shars	7	March, Sept.	"	1860	100 1/2	101
Michigan Southern	1,000,000	1st mortgage, inconvertible	7	May, Novemb.	"	1860	92	96
New York and Harlem	1,800,000	Do. do.	7	May, Novemb.	"	1861-72	83	84 1/2
New York and New Haven	750,000	No mortgage, do.	7	June, Decemb.	"	1855-60	81	82
New Haven and Hartford	1,000,000	1st mortgage, do.	6	Jan'y, July	"	1873	90 1/2	91
Northern Indiana	1,000,000	Do. do.	7	Feb'y, August	"	1861	89	93
Do. Green Branch	1,500,000	Do. do.	7	Feb'y, August	"	1863	85	86
New York Central	8,287,000	No mortgage, do.	6	May, Novemb.	"	1883	89 1/2	89 1/2
Do. do.	3,000,000	No mortgage conv. from June 57-59	7	15 June, 15 Dec.	"	1864	102 1/2	102 1/2
Panama, 1st issue	900,000	Convertible till 1856	7	Jan'y, July	"	1866	100	102
Do. 2d do.	1,478,000	Do. till 1858	7	Jan'y, July	"	1866	100	102
Reading, issued 1843	1,573,000	Mortgage, inconvertible	6	Jan'y, July	Phila.	1880	85	85
Do. do. 1844 '48 '49	1,300,000	Do. convertible	6	Jan'y, July	"	1860	84	90
Do. do. 1849	3,469,000	Do. inconvertible	6	April, October	"	1870	86 1/2	87

CITY SECURITIES.	Int't payable.	Off'd.	Asked.	CITY SECURITIES.	Int't payable.	Off'd.	Asked.
New York, 7 per ct. 1857	Feb'y, July	99	100	Milwaukee, 7 per ct. coup.	X	Divers	85
Do. 5 do. 1858-60	May	95	97	New Orleans, 6 per ct. cp. R.R. X	Do.	Do.	74
Do. 5 do. 1870-75	August, Novemb.	95 1/2	96 1/2	N. Orleans, 6 per ct. cp. municip. X	Jan'y, July	71	77
Do. 5 do. 1880	November	94 1/2	96	Philadelphia, 6 per ct. 1876-98	Jan'y, July	91 1/2	91 1/2
Albany, 6 per ct. coup. 1871-81 X	Feb'y, August	97 1/2	98	Pittsburgh, 6 per ct. coup.	X	Divers	73 1/2
Allegheny, 6 per ct. coup. X	Jan'y, July	97 1/2	98	Quincy, 8 per ct. coup. 1868 X	Jan'y, July	73 1/2	75
Baltimore, 6 per ct. 1879-90	Quarterly	97 1/2	98	Racine, 7 per ct. coup. 1873 X	10 Feb'y, Aug	85	85
Boston, 6 per ct. coup. X	April, October	97 1/2	98	Rochester, 6 per cent. coup. X	Divers	95	100
Brooklyn, 6 per ct. coup. Long X	Jan'y, July	100	100 1/2	St. Louis, 6 per ct. coup. Long X	Do.	Do.	79
Clev'd, 7 per ct. cp. W.W. 1879 X	Do. do.	101	102	Do. do. Municipal X	Do.	Do.	81 1/2
Cincinnati, 6 per ct. coup. X	Divers	87	90	Sacramento, 10 p. ct. cp. 1862-74 X	Do.	Do.	71
Chicago, 6 per ct. coup. 1873-77 X	Jan'y, July	89	90	S. Francisco, 10 p. ct. cp. 1868, pay N.Y. X	May, Novemb.	80	80
Do. 7 per ct. coup. 1880 X	Jan'y, July	100	100 1/2	Do. 10 p. ct. cp. 1871 X	Do.	Do.	95
Detroit, 10 per ct. cp. W.W. 1873-78 X	Feb'y, August	100	102 1/2	Do. 10 p. ct. pay N.Y. X	Jan'y, July	80	80
Do. 8 per ct. cp. Long X	March, Sept.	101 1/2	101 1/2	Do. 6 per ct. pay N.Y. 1875 X	Do.	Do.	60
Jordan City, 6 per ct. cp. W.W. 1877 X	Jan'y, July	94	95	Wheeling, 6 per ct. coup. X	Divers	87 1/2	87 1/2
Louisville, 6 per ct. cp. 1880-88 X	Divers	79 1/2	81	Do. 6 per ct. Mnn. 1874 X	March, Sept.	81 1/2	81 1/2
Memphis, 6 per ct. coup. 1882 X	Jan'y, July	98	100	Zanesville, 7 do. X	April, October	97 1/2	97 1/2

Cincinnati Stock Sales,
By HEWSON & HOLMES.

For the week ending August 13th, 1886.

BONDS.	Per cent.
\$2,000 Little Miami, 6 per ct. 1st Mort.	80
5,000 Covington & Lex., 6 per cent. 1st Mort.	70
5,000 " " " " " " " " " "	65
1,000 Indiana Central, 10 per ct. Income, due in '86	96
3,000 Little Miami, 7 per ct. due in 1858	96
3,000 Marietta and Cincinnati, 1st Mort.	75
2,000 Hillsboro' and Cin., 7 per ct. 1st Mort.	47 1/2
6,000 Clark County, Ky., 6 per cent.	70
3,000 Virginia, 6 per cent.	92 1/2
1,000 Cleveland and Toledo, 7 per cent. Income	75
500 Columbus & Xenia, Dividend, 7 per cent.	80
due in 1866	85
700 Little Miami, June, 1856, Dividend Scrip.	80
1,000 City of Springfield, O., 7 per ct.	80
1,000 Cine., Ham. and Dayt. 7 per ct. 2d Mort.	80
STOCKS.	
20 Shares Little Miami	80
141 " Ohio & Mississippi	6
80 " Covington and Lexington	13
13 " Cin., Ham. and Dayton	65
60 " " " " " " " " " "	65
89 " Indiana Central	48
100 " Dayton and Western	18
180 " Cincinnati, Harrison and Indianapolis	8
44 " Eaton & Hamilton	22 1/2
50 " Dayton and Michigan	10
20 " New York Central	85
100 " Cin. & Chicago	4

By KIRK & CHEEVER.

For the week ending August 11th, 1886.

BONDS.	Per cent.
Little Miami, 6 per ct. Mort.	80
Covington & Lexington, 2nd Mort. 7 per ct.	72 1/2
Ohio & Mississippi, 2nd Mort. 7 per ct. (Eastern Division)	48
Indianap. & Cin., 2nd Mort. 7 per ct.	40
Cin., Ham. and Dayton, 2nd Mort. 7 per ct.	84
Hillsboro' and Cin., 7 per cent. 1st Mort.	49
Covington & Lexington, 10 per ct. Income	70
Indianapolis and Cincinnati Dividend	70
Columbus and Xenia Dividend, due Jan'y 1, 1861	88
Do. do. due July 1, 1866	88
Little Miami, Dividend Scrip, issued June, 1856	78
STOCKS.	
Bellefontaine and Indiana, 25.-Cin., Ham. and Dayton, 66.	
-Col. and Xenia, 82.-Cincinnati, Ohio, 8 1/2.-Covington & Lexington, 15.-Dayton & Western, 17.-Eaton and Hamilton, 20.-Indianapolis Central, 50.-Indianapolis and Cincinnati, 53.-Little Miami, 59.-Mad River & Lake Erie, 15.-Marietta and Cincinnati, 16.-Ohio and Mississippi, 6.-Hillsboro' and Cincinnati, 16.-Perrin and Indianapolis, 14.-Cincinnati, Wilma, and Zanesville, 12.	

Marie & Kutz Money Circular for the
European Steamer of the 20th Inst.

[TRANSLATED EXTRACT.]

NEW YORK, Tuesday, Aug. 19, 1886.

Since our advices of the 11th inst. the market has again been active. Prices have considerably fluctuated, and, though at the close a better feeling prevails, almost all stocks with only a very few exceptions show a further decline compared to our last quotations. Money has been irregular; on call the supply has been better than during the previous week, while discounts are not quite so easy and rates a trifle higher. The stock orders from abroad have not been very important by the last mail, but they were for a greater variety, tho' only in small amounts. State Stocks.—The demand has been active at a slight decline in prices. Virginia receded 1/4, Missouri 3/8, Tennessee 1/2.—Indiana 5s and Ohio 6s sold to a fair extent at former prices; the new California loan of 1875, has also been done again at 70 1/2-70. City and County Bonds.—Except in St. Louis City 6s, which are in fair demand, the transactions have been only of a retail character. Railroad Bonds.—Illinois Central bonds have again been the most active, but closed at a decline of 3/8. Erie 1875 bonds are 1 1/2 per cent. lower. Erie 1883 bonds 1/2. We also note some purchases of Michigan Central bonds, Ohio and Pennsylvania, and La Crosse and Milwaukee bonds for foreign account. Railroad Shares.—The business has been large at very fluctuating prices. Erie sold between 58 and 60, closing at 59 1/2. Reading sold as low as 84 and as high as 87, and closes at 86. N. Y. Central was down to 85 1/2, closing at 85. Panama is very heavy, and declined 2 1/4. Michigan Central, 1/2; Michigan Southern, 1 1/4; Cleveland and Toledo, 3/4; Chicago and Rock Island, 1/4; Cleveland, Columbus and Cincinnati, 1/2; Galena and Chicago 1; Illinois Central stock sold as high as 110, but fell off again to 109 1/2. Money.—The supply on call has been better for the past week, at 7 per cent,

discount, a trifle higher prime bills, 7 1/2%; names less known, 10 1/2. Exchanges—Weak, with a very moderate business. London, 109 1/4; Paris, 5.17 1/2; 5.15.

MARIE & KANZ.

Extract from De Coppet & Co.'s Money Circular for the European Steamer of the 20th inst.

[TRANSLATED.]

New York, Tuesday, Aug. 19, 1856.

Since our last advices of the 11th inst., a more marked demand for money has been experienced as well from the mercantile class, as from stock operators, and the tendency of rates of discount has been upward through the week. The semi-official returns for the fiscal year to 1st of July show that up to this period the exports from the United States, including specie, has rather exceeded the imports, in spite of the enormous importation at the port of New York since then, which attracts attention, as it must have, sooner or later, a direct influence upon the shipment of specie. The two above-named causes seem mainly to have contributed in keeping our Stock market in a sort of hesitation, which have occasioned oscillations, resulting more generally in a decline, as shown by the annexed table of daily quotations. European demand by the last steamer has been most limited, and the transactions generally moderate. State Stocks—Some sales of United States 6s, 1867, have been made at 117. Transactions to some amount have taken place: in Indiana 5s at 1/4 advance, in Virginia 6s at 1/4, and in Missouri 6s at 1 per cent. decline. The latter were rather active. City Bonds—We know of no transactions worth mentioning, excepting a few sales of St. Louis 6s at rather better prices. Railroad Bonds—At private sale we notice some sales of Ohio and Pennsylvania Income, of Milwaukee and Mississippi 1st mortgage 3d security, and Michigan Central 8s, 1860, at about previous quotations. At the Stock Exchange there was some animation in Illinois Central Construction, closing at 3/4 decline. Some few New York Central 6s have been done at 1/4 advance, and some Erie 7s, 1875, at a decline of 1/8, and also some Terre Haute and Alton 2d mortgage at improving prices. Railroad Shares—There has been some animation in Erie, which after various oscillations closed at a decline of 1/8. Also, in New York Central and Reading, which have advanced 1/8. Transactions to a moderate extent took place, and with a decline in Michigan Southern of 1/8, and in Cleveland and Toledo of 1/8. With a pretty good demand for Illinois Central, they rose 1/8. Panama, on the other hand, have been affected downward by vague apprehension of some future competition. They are quoted 2 1/2 lower. Money in active demand at 7 for call loans. Paper is more offered at 8 1/2 for 1st class, and from 9 1/2 for less known signatures.

DE COPPET & CO.

American Stocks in London.

Michigan Southern and Northern Indiana Railroad Stock has just been admitted on the official list of the Stock Exchange. This stock has always paid 10 per cent. dividend since the opening of the road, and frequently divided a surplus equal to 5 per cent. additional. The market price in New York has averaged about 126. During the recent pressure it has ranged from 90 to 105. There will be a half-year's dividend due on the 1st of August of 5 per cent., already declared in the New York papers. The stock is selling here at 92 sterling, equal to 87 sterling ex-dividend, which pays fully 11 per cent. per annum upon cost. The road was opened for business in 1852. The gross earnings for 1853 were... \$1,573,181.20 The gross earnings for 1854 were... 2,158,311.91 The gross earnings for 1855 were... 2,595,630.22 And thus far during 1856, the earnings have been at a rate indicating over \$3,250,000 for the year. These earnings, we understand, are derived from the portions of the road now in operation, and the company have 120 miles of new line nearly completed, which will be opened for business within a few months, and from which the

company anticipate a large increase of earnings. The road extends from Chicago, on Lake Michigan, to Toledo and Munroe, on Lake Erie, connecting with the great lines to the Atlantic cities. The number of miles of road belonging to the company, now in actual use, is 338, and in process of construction, 130. In July, 1855, the capital stock paid in was \$8,028,900; the bonded debt, \$5,500,000. When the double track is completed, and all the new lines in operation, the stock and debt will stand at \$8,000,000 each.—London Morning Herald, July 26.

New Joint Stock Schemes in England.

A resume on the 30th of June showed the total capital nominally required for the new schemes introduced during the half year to be £28,490,000. Of this about £11,000,000 was the amount estimated as having been promised to foreign countries, while of the remainder only a small proportion was pledged to undertakings of a description to withdraw serious sums from the ordinary channels of employment. The prospect, although not calculated to awaken anxiety, was such as to stimulate caution. Nevertheless, although the public are disposed probably to infer that this fact and the dullness of the money market during the subsequent period have led to an abatement of the ardor of projectors, such has not been the case. Their demands have steadily increased, and if any effect has been produced by the less buoyant state of prices, it has simply been to prevent this increase assuming still more objectionable dimensions. The subscriptions invited from January to June averaged £3,900,000 per month, and in July they had reached £5,370,000. Annexed is the list:

Metropolitan railroad.....	£1,000,000
New Brunswick and Canada land and railroad.....	220,000
Calcutta and South Eastern.....	1,000,000
St. James' Hall.....	40,000
Sittingbourne and Sheerness railroad..	80,000
Central Italian Copper Mining Co.....	120,000
Forest of Dean railroad.....	65,000
London and West of Ireland Fishing and Fish Manure Co.....	50,000
Patent Woollen Fabric Co.....	100,000
London Cork Co.....	50,000
Lahn (Nassau) Iron Co.....	70,000
Coplapo Extension (Chile).....	180,000
Detroit and Milwaukee Bonds.....	250,000
United Kingdom Provision Co.....	500,000
European and Indian Junction Telegraph.....	200,000
Hungarian land.....	85,000
South Western Hotel Co.....	50,000
Metropolitan Bath Co.....	10,000
Bristol, South Wales, and Southampton Union R.R. Co.....	300,000
Madras Extension.....	1,000,000

An additionally unfavorable feature connected with the above is that the foreign proportion presents relatively a large augmentation. Of the total of £5,370,000; £3,125,000, or considerably more than half, is destined to be drained from us in quarters whence a reflux will be very distant.—£2,000,000 is intended for India, although the requirements for that country have for several years past produced a chronic pressure on the money market, which most injuriously affected our resources during the war, and the amount remaining to be sent thither was still inconveniently large. £470,000 is raised for Canada and Western America, apart from a further sum understood to have been privately negotiated on the bonds of a railway in the repudiating State of Michigan; £180,000 is for Chile; £190,000 for mines in Italy and Germany; £85,000 for a land project in Hungary, and £200,000 for a telegraphic communication with the East. Whether undertakings such as these can be entered upon safely at the rate at which they thus promise to be multiplied, any person can judge who will avail himself even of the experience of what is now passing in Paris. A large majority of them are sound; and such as would be desirable if there were a prospect of an early pause in the number to be introduced. But

on this point there is little hope. It is certain that one or more important railway lines are about to be brought forward under attractive concessions from the Turkish government, and that Russia is deliberating on a comprehensive plan to obtain from the capitalists of England and France the means to prevent, by a network of internal communications, a repetition of her recent failure.—The first will be recommended by their commercial and political characteristics; and the latter by the existing prices of Russian securities; and as the guarantees in each case will, of course, be calculated to meet the condition of the money market for the time, there can be little doubt as to their reception. Once commenced, with the present facilities for railway construction, they are sure to proceed with rapidity, and, although owing to the activity of her trading relations with England, the expenditure in the case of Turkey would be likely to flow back freely; in Russia it would probably be hoarded with almost as much tenacity as in India. Under these circumstances it is for the public to consider whether they should exercise for the moment a discriminating reserve. At all events they should bear in mind, before taking every American or other debenture that may be offered, that the agents in the transaction are paid a large percentage for recommending them, and also with regard to undertakings announced on the Stock Exchange, the fact of their being quoted at a premium before the day of issue does not, except in large and unquestionable instances, afford the slightest proof of the value at which they will really stand.—London Times, Aug. 4.

American Railroad Journal.

Saturday, August 23, 1856.

Milwaukee and Horicon Railroad.

In another column we give a recent exhibit, or circular statement, issued on the occasion of offering for sale \$450,000 mortgage bonds of this company.

These bonds may, we think, be considered a first class Wisconsin security, which experience has shown to be equal to the best in the country. Wisconsin railroads have proved exceedingly productive upon their full cost. Their routes are in direction of the trade of the country they traverse, and in that of the great line of emigration setting west from Lake Michigan. They fortunately do not as yet come into injurious competition. That portion of Wisconsin traversed by her railroads is one of the most densely settled portions of the West, and supplies probably a larger amount of traffic, in proportion to its area, than any other.—The soil of the State is well cultivated, and exceedingly productive, while its people are, probably more than any other, addicted to railway traveling. In addition to these reasons for the success of her railroads, the finances of these works have been conducted with uncommon prudence and skill. No roads have been undertaken that have not been successfully carried forward, and none that have not, or that do not promise to be productive. All these causes have tended to render the securities of the Wisconsin railroads justly favorites as well in foreign, as in our own markets.

The above road we are confident is no exception to the general rule of success. It traverses an admirable section of country, and one capable of supplying an abundant traffic, as the result of the working of the few miles already completed shows. For the three months ending May 26, the receipts of the fifteen miles in operation were over \$12,400, which exceeded per mile the average receipts of the Milwaukee and Mississippi, with a

line opened of 100 miles through the finest portion and extending to the capital and centre of the State. The increase of mileage on the Milwaukee and Horicon must be followed by an increase of earnings per mile when the road shall be opened to Berlin. There seems to be no reason why it should not become as productive as any railroad in the West.

The loan offered at the present time appears to be amply secured. The total cost of the road upon which the loan is issued, 42 miles, is \$840,000. Of this \$722,000 have been raised by private or corporate subscription. The issue is equal to only \$10,000 per mile, which is a first and only lien upon the road. The bonds bear an interest of 8 per cent. It would seem that no better securities could be got up. The affairs of the company are well conducted. It has a very respectable and responsible list of officers. We can speak of its management in as favorable terms as of the road, and can conscientiously commend the securities to the confidence of the public.

Honduras Railroad.

The following is the statement recently put forth by the company proposing to build a railroad across the Isthmus of Honduras.

ESTIMATED COST.

Grading and Excavations.....	\$1,982,000
Bridging.....	608,750
Culverts and Passages.....	161,000
Superstructure.....	1,847,400
Stations, Wharves, &c.....	407,000
Equipment and Rolling Stock.....	355,000
Engineering and Contingencies.....	1,485,345
Preliminary Expenses.....	90,000
Land Titles.....	50,000

Total estimates.....\$6,436,495

ESTIMATED INCOME.

From California passengers.....	\$875,000
Treasure transit.....	200,000
Export freight.....	280,000
Mails, English and American.....	150,000
Central American trade.....	120,000
Local traffic.....	50,000

1,675,000

And 100,000 tons general freight.....2,300,000

Together.....\$3,975,000

Operating road.....\$500,000

To Government of Honduras.....50,000

550,000

Yearly net income when fully established.....\$3,425,000

New York, via above route, to San Francisco, 4,121 miles.

Length of road, ocean to ocean, 161 miles.
Land grant from Honduras, 1,500,000 acres.
Charter, exclusive, for 70 years.

It is stated, upon good authority, that the project has been taken up by parties competent to furnish means for its immediate construction, and that work upon it is to be commenced at once.

The route as far as California is concerned, has some decided advantages over that by Panama. The saving in distance will be about 1,100 miles. It has excellent harbors on each side of the Isthmus—on the Gulf side, the best that exists upon the whole coast.

In its local advantages, it having a very decided superiority over the Panama, or any other route proposed, it traverses an open champaign country, well peopled and well cultivated; possessing a salubrious climate, and which will render it very attractive to immigrants from higher latitudes.

It produces in abundance everything peculiar to the tropics, with a climate exceedingly favorable to weak constitutions. The Panama route, on the other hand, produces nothing, is almost uninhabited, and has a climate exceedingly fatal to all but its native tribes.

New York and Erie Railroad.

The following is a statement of the earnings of this road for the first three quarters of the year.

Total earnings for 9 months ending	
June 30, 1856.....	\$4,674,892 48
Transportation expenses (50.82 per cent.).....	\$2,375,730 88
Rent of Union R.R.....	62,550 00
Taxes p'd applicable to whole year.....	48,681 59
Loss on Lake Erie steamers, 1855.....	13,385 77
Amount paid D. L. & W. R. R. Co. for drawback on freight transport'd during year end'g December 31, '55.....	8,898 60
Transportation expenses incurred prior to Oct. 1, '55, since paid.....	20,500 97
Total expenditures (54.28 per cent.).....	2,529,747 76
Net earnings.....	\$2,145,144 67
Interest on float'g debt.....	\$22,382 88
Do. on fund'd debt.....	1,304,677 50
	1,327,009 83
Balance of net earnings, applicable to dividends, equal to 8.18 per ct. on \$10,000,000 of stock.....	\$818,134 84

Knoxville and Kentucky Railroad.

We find in the Knoxville Register an article upon the above road, from the pen of M. B. Prichard, Esq., Civil Engineer, from which we make the following extracts. Mr. Prichard is endeavoring to enlist the sympathies of the people of East Tennessee, in support of this enterprise:

The Knoxville and Kentucky railroad commences at Knoxville and ends at the Kentucky line in Whitley county, and is 63 miles in length—it traverses Knox, Anderson and Campbell counties. A survey has been made of the entire line, and a location established of 37 miles to Powell's valley, no further work has been done. The line being "across the country," a portion of the work is heavy. The maximum grade is 58 feet per mile, the minimum radius of curvature, except in three instances, 1,133 feet. The country traversed is remarkably favorable for the construction of a railroad, it is well watered, abounds in good material for masonry, is well timbered, is abundantly able to furnish supplies to contractors, is perfectly healthy, the material to be excavated both earth and rock, is of an easy character, and there is no natural obstacle in the way of making a first class road at a reasonable cost.

The road is entitled to a loan from the State of \$10,000 per mile, whenever the grading is completed and the cross-ties furnished, and also to \$100,000 for Clinch river bridge, whenever "bona fide" stock is subscribed, sufficient with the State aid to build the entire road. The company have the privilege of ending the road at the base of the Cumberland mountains, for a period, and thus be enabled to obtain the bridge loan, whenever sufficient stock is received to complete the road thirty miles, the base of Walden's ridge, the first mountain of the Cumberland range being reached in that distance.

The estimated cost of building this 30 miles except iron and equipment, is \$510,000.

The resources of the company applicable to grading are as follows:

Stock subscription of Knoxville.....	\$50,000
Knox Co.....	100,000
Anderson.....	100,000
Individuals.....	60,000
To be taken by contractors.....	50,000
Bridge loan from State, conditioned as shown above.....	100,000

Total.....\$460,000
Am't of stock yet required.....50,000

Railroad Earnings for July.

The earnings of the Michigan Central railroad company for July, 1856, were:

	Pass'gs.	Freight.	Miscel's.	Total.
1856.....	\$139,596	\$80,289	\$6,815	\$226,701
1855.....	10,394	64,186	8,652	183,233

Increase..\$29,202 \$16,103 \$43,468
Decrease.....\$1,837

The earnings of the Chicago and Rock Island railroad company for

July, 1856, were.....\$149,248
July, 1855.....99,742

Increase (nearly 50 per ct.).....\$49,506

The earnings of the Stonington railroad, in July, were as follows:

	1855.	1856.	Inc.
Passengers.....	\$14,005	\$16,636	\$2,630
Freight.....	7,517	7,557	40

Total.....\$21,522 \$24,193 \$2,670

The Norwich and Worcester road will show, we understand, about \$2,000 gain in July over the same month of last year.

The earnings of the Dayton & Western railroad were—

From all sources.....\$10,186 26
For July, 1855.....6,351 90

Increase, 60 per cent.....\$3,834 36

The aggregate earnings of twenty roads for July, are \$3,931,049 against \$3,126,602 in July last year, an increase of \$804,446, about 25 per cent. The comparative earnings of the four great lines to the West were, for the ten months of the fiscal year ending 31st of July, as follows:

	From October 1st, '55, to July 31st, '56.	From October 1st, '54, to July 31st, '55.
New York Central.....	\$6,126,641	\$5,184,712
New York and Erie.....	5,153,167	4,513,167
Pennsylvania Central.....	4,187,805	2,998,482
Baltimore and Ohio.....	3,961,405	3,385,523

Total 10 months.....\$19,409,018 \$16,081,884

Increase over last year.....\$3,327,134

Equal to an average increase of 20 1/4 per cent.

The receipts of the Morris Canal have been:

Total to Aug. 2, 1856.....\$151,771 58
Week ending August 9, 1856.....8,603 08

Total to Aug. 4, 1855.....\$147,949 39

Week ending Aug. 11th, 1855.....8,956 32

156,905 71

Increase in 1856.....\$3,468 95

The earnings of the Michigan Central Railroad Company for the 1st week in August, 1856, were:

	Passengers.	Freight.	Total.
1856.....	\$30,940 09	\$17,320 57	\$48,260 56
1855.....	24,997 46	11,684 89	36,681 85

Increase.....\$5,942 63 \$5,636 18 \$11,578 11

The earnings of the La Crosse and Milwaukee Railroad Company, in the first week in August, amount to \$9,618 93. Considering the fact that the farmers are now busily engaged in their fields this is large.

The earnings of the Cincinnati, Hamilton and Dayton Railroad for July were:

For Passengers.....	\$22,662 76
For Freight.....	16,176 69
Mail Expenses.....	1,411 00

Total.....	\$40,250 45
For July, 1855.....	31,659 74

Increase over 27 per cent.....\$8,590 71

The earnings of the Mad River and Lake Erie Railroad for July were:

For Passengers.....	\$19,725 82
For Freight.....	20,286 07
For Mail and Express.....	2,100 00

Total.....	\$52,111 89
For July, 1855.....	42,784 63

Increase nearly 22 per cent.....\$9,316 26

The earnings of the Central Ohio railroad for July were:

For Passengers.....	\$22,142 23
For Freight.....	28,548 23
For Mail and Express.....	2,820 46

Total.....	53,511 81
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The earnings of the Indianapolis and Cincinnati railroad for

July, 1856, were.....	\$40,426 48
July, 1855.....	24,323 00

Increase.....\$16,103 48
—equal to 67 per cent.

Rutland Railroad Bondholders' Meeting.

In compliance with the emphatically expressed wishes of a large number of persons who are interested in its various securities and obligations, a special meeting of the bondholders and creditors of the Burlington Railroad Corporation will be held at the business room of the "Boston Stock Exchange Board," in Union Bank Building, No. 40 State street, on Thursday afternoon, the 21st inst., at 3½ o'clock. The object of this meeting is to consult together in regard to the affairs of the corporation, and recommend such measures and suggestions for the co-operation of the Trustees, as may be deemed conducive to the safety and best interests of the bondholders and creditors, many of whom are not only very much disappointed, but quite impatient at the delay which has deprived them of any returns from the income of the road.

It is particularly desirable that on this occasion there should be a full attendance of all parties interested in this important matter, for in a multitude of counsellors (not lawyers) there is wisdom; and in union there is strength. Nothing in this call should be construed as a movement in opposition to the "Board of Trustees," or as reflecting upon their management or fidelity in any way whatever, and these worthy gentlemen can surely have no objection to a full and mutual interchange of views and opinions, on the part of those whose investments in the securities of the corporation are more or less valuable, according to the income that may be derived from the most judicious management of the property.

The first mortgage bonds amount to \$1,800,000; the second to \$1,200,000, and the third also to \$1,200,000; total, \$4,200,000. The 8 per cent. guaranteed stock amounts to \$350,000; the 6 per cent. preferred stock to \$600,000, and the common stock to \$1,350,000; total, \$2,800,000 in stock and \$4,200,000 in 7 per cent. bonds, besides over half a million of back interest, arising from unpaid coupons; making the whole cost of the Rutland road, in round numbers, seven millions

of dollars, which is certainly an investment well worth looking after.

The gross earnings of the road for the financial year ending June 1st, were \$401,000; of which \$350,000, being 87½ per cent. of the gross income, has been absorbed in running expenses, extraordinary road repairs, rail renewals, cars and locomotives—not added to the cost of the road, but deducted from the receipts; thus reducing the actual net revenue to \$51,000, which is not enough to pay even one set of the over-due coupons, on the 1st mortgage bonds, into \$12,000. There is now about two years' interest due on all the bonds. Taking the 1st at 44, the 2nd at 14, and the 3rd at 4, the present market value of the whole would be but \$1,008,000, for an aggregate cost of \$7,000,000—placing the stock at zero, for the purposes of this explanation only. But there can be no reasonable doubt that there is a prospective value to all the classes of bonds and shares, and if a suitable plan of the consolidation could be devised, to embrace the whole, its accomplishment would be a consummation most earnestly to be wished for the bondholders, creditors and stockholders of the Rutland and Burlington railroad.—*Boston Courier.*

On the Junction of the Atlantic and Pacific Oceans, and the Practicability of a Ship Canal, without Locks, by the Valley of the Atrato.

By Mr. F. M. KELLEY, U. S.

[Abstract of paper read at the Institution of Civil Engineers, April 22, 1856.]

It was stated that the consideration of this subject had become urgent, and the adoption of some definite plan indispensable, in consequence of the commercial activity, which had resulted from the discovery of gold in California, and in Australia, and the rapid development of trade, throughout the whole of the Pacific. But the very extension of trade had introduced new elements into the problem: the larger dimensions now given to ships, and the increasing value of time, rendered it necessary that the proposed communication should be of a sufficient width and depth, to permit the passage of the largest class of vessels, and that it should, if possible, be constructed without locks, so as to insure economy of time, as well as of distance. It then gave a brief review of the different routes hitherto proposed, and the objections to which they were open.

The Tehuantepec route would require 150 locks; even then it would be 210 miles in length, and great improvements would be necessary in the harbors at both ends. The very unsettled state of the government in Mexico, rendered this undertaking most hazardous at the present time.

The Honduras route, 160 miles in length, was open to the same objection as to locks; the summit level was very high, 2,681 feet above the sea; and, moreover, sufficient water could not be obtained, for the number of locks required.

The Nicaragua route, 194 miles in length, would have 28 locks; the river San Juan would require to be deepened throughout; 47 miles of additional canal must be made; great improvements must be effected in the harbor of Greytown, and a new harbor altogether constructed on the Pacific.—The modification of this project, by which the port of Realeja would be the terminus on the Pacific, would increase the distance above 100 miles, and require great additional lockage, which it was very doubtful whether the Lake Leon could supply.

The Chiriqui route was considered utterly impracticable by M. Hellert, who found that the supposed passage through the mountains offered the most formidable difficulties.

The Panama route would require 86 locks, and six aqueducts; and the approaches on either side, would demand vast alterations to adapt them to the present wants of commerce.

The San Blas, or Mandingo Bay route, had never been sufficiently explored, on account of the decided hostilities of the Indians; moreover, that part of the Atlantic was beset with reefs and

shoals, and there was every reason for believing that there was no depression in the mountain range.

The Darien route was only partially explored by Mr. Lionel Gisborne, who reported favorably of its capabilities; but subsequent expeditions had invalidated these conclusions, and tended to demonstrate that the Sierras Lloranas formed an unbroken chain from the Gulf of San Blas to the Gulf of Darien. All explorers agreed on the decided hostility of the Indians, and, with the exception of Dr. Cullen, who averred that he had repeatedly crossed the Isthmus at that point, no subsequent explorer had succeeded in traversing it. It was proposed to construct a canal without locks; but the great difference in the height of the tide at the two extremities, (25 to 30 ft. in the Pacific, and only 2 feet in the Atlantic), would produce a tidal current of such force as to endanger the works, and materially interfere with navigation.

The Atrato route had already been pointed out by Humboldt, as likely to afford one of the best solutions of the problem. It was stated that the River Atrato flowed almost due north for a length of 300 miles, in the midst of a vast alluvial plain between two ranges, resulting from the bifurcation of the Andes; it then discharged itself by nine mouths into the Atlantic, by the Bay of Candelaria in the Gulf of Darien. The upper part of the river had been carefully explored by Messrs. Trautwine and Lane, who had both reported against the feasibility of any plan for uniting the head waters of the Atrato, with those of the San Juan, which flowed into the Pacific. An exploration on the Pacific side, led to the discovery of a depression in the mountain chain, between Punto Ardita and Punto Marzo, which was found to correspond in an almost direct line eastward with the Truando, one of the most considerable western affluents of the Atrato.

The route more especially advocated in the paper, would commence on the Atlantic side, at the estuary of the Atrato, by widening and deepening one of its entrances, removing the sand bars, and stopping up, by breakwaters and dams, the remaining mouths, so as to direct the full force of the current into the branch called Cano Coquito, or an entrance might be effected by a side cut from the bay into one of the mouths, and the erection of guard gates at each end; by stopping the current, would prevent any deposit or bar outside. At the distance of two miles from the mouth of the river deepened to 30 feet; and from this point to the mouth of the Truando, was no where less than 47 feet, with an average width of 350 yards. It was then proposed to follow the Truando for 36 miles, deepening and widening its channel where required, to a point named Townsend's Junction. Up to this point the works required would be very simple, as the banks are principally levels, formed of sedimentary deposit, and the soil of the bed of the river was of the same character. From Townsend's Junction, an open cut was contemplated for a distance of 13 miles. It was then proposed to tunnel through the base of the ridge, a length of 2¼ miles. A double tunnel was recommended, as the width (200 ft.) would require a single arch of too great a height; the division into two arches would also have the advantage of precluding any possibility of collision. The height proposed (120 ft.) would be sufficient to allow of the passage of the largest vessels, by merely lowering their topmast. From the tunnel of the Pacific, a distance of eight miles, the canal would follow the valley of a small stream, and debouch into Kelley's Inlet.

The line would thus uninterruptedly proceed, without locks, direct south, from the Bay of Candelaria to the junction of the Atrato, 7° 15' N. lat., and 77° 8' 32" W. long.—a distance of 67 miles, 1,436 yards, whence it would diverge by the Truando to the south-west, and terminate at the Peninsular of Paracuchich or Kelley's Inlet, 6° 57' 32" N. lat.; 72° W. long.—a distance of 63 miles, 1,216 yards. It would thus have a total length of 131 miles, 892 yards, with a minimum width and

depth throughout of 200 feet and 30 feet respectively. The most important point to be considered, was the rate and direction of the flow of water from the junction of the Truando with the Atrato, and the supply which might be depended on at that point. It had been ascertained by Col. Totten, the Engineer of the Panama railway, that the mean level of the two oceans was very nearly, if not entirely, similar. The difference in the height of the tides at the two extremities of the proposed route, was found to be,—at the entrance of the new river in the Pacific 12 ft. 6 in. at spring tides; and 10 ft. 11 in. at neap tides,—while the tidal wave of the Atlantic, at the mouth of the Atrato, never exceeded two feet at any phase of the moon. After careful observation, Capt. Kennish had fixed the height of the junction at 15.2 feet above the mean tidal level of the two oceans.

The junction of the Truando with the Atrato, would thus be 9 feet above the Pacific at the highest tide, and would flow down it with a velocity equal to that head; while, at the lowest tide, the velocity would be equal to a head of 21.45 feet.—The summit being at the same height from the mean level of either ocean, and the distance being nearly equal, their average rate of current would be nearly the same,—about $2\frac{1}{2}$ miles per hour.—As far as theory could elucidate the tidal influence of the Pacific, it would extend to Townsend's Junction, and pass under the fresh water coming down the river, without commotion, either at flood or ebb. That part of the river between Townsend's Junction and the Pacific, would be slightly agitated by the rise and fall of the tide, but the velocity of the current would be scarcely effected.

By careful calculation it had been ascertained, that the discharge of the Atrato was 667,014,600 cubic feet per hour, and the mean discharge of the new river would be about 42,000,000 cubic ft. Now, if this were taken solely from the bed of the Atrato, it would only reduce that river one-sixteenth, and its surface level $8\frac{3}{4}$ feet, the Atrato being 58 feet deep at the point of junction with the Truando.

The principal advantages which gave the proposed route the pre-eminence over all others, were claimed to be:—

1st. That the two oceans could be thus united, by an open channel without locks or any other impediment.

2d. That the width and depth would be sufficient to allow of the simultaneous passage, up and down, at all times, of the largest class of vessels.

3d. That excellent harbors existed at both ends, requiring but little improvement, and at all times perfectly accessible.

4th. That the route passed through a country in undisputed possession of a legal government, and among a people favorable, instead of hostile to the undertaking.

A summary of the estimated cost of the canal, including the works of every kind throughout its whole length, with lighthouses, piers, depots, &c., as also the execution, medical and commissary departments, was annexed to the paper. The total, including all contingencies, was fixed at \$145,407,042, or £30,000,000. In constructing the canal of a width sufficient for the passage of one ship at a time, the estimate would be reduced nearly one-half.

The vast saving in time and distance, which would be effected by this canal, was then dwelt upon. From New York to San Francisco, it would be no less than 13,000 miles; and proportionately large for all the ports in the Pacific. Details were given of the rapid development of trade which was annually increasing between Great Britain, France, and the United States—and the Pacific; and also an approximate calculation of the commercial value of the canal.

In conclusion, the author repeated that the plan developed was, perhaps, not the only practicable one,—that although the information contained in the paper had been obtained, by sending to the Isthmus four different corps of engineers, fully provided with instruments for leveling and surveying, and they had made complete plans, and sec-

tions of the route, yet that a more extended survey might suggest the superiority of selecting some other affluent of the Atrato, and some other terminus on the Pacific. His principal object has been to show the practicability of communication between the two oceans, by the valley of the Atrato, and that it possessed peculiar advantages for rendering that communication as large and open as the present wants of commerce imperatively required. If such was the case, he thought that it was worthy of an official survey, and thorough examination, by the governments of the great commercial nations of the world.

April 29, 1856.—The entire evening was devoted to the discussion upon Mr. F. M. Kelley's paper.

It was admitted that a correct description had been given of the routes hitherto proposed, and of the valley in question; but that the route by Panama would be found the most economical and most convenient, if the communication was made between the River Chagres and the Rio Grande, where there were only 15 or 16 miles from tide to tide, instead of by Chorrera, as proposed by M. Napoleon Garrela.

It was objected that Mr. Trautwine, when starting on his expedition, was not supplied with proper instruments for taking a correct survey, and, therefore, that his account could not be implicitly relied on;—that Capt. Kennish, on his return to Carthagena, was also in possession of but imperfect levels, and that if the height of the junction of the Truando with the Atrato was not absolutely correct, it would invalidate all the calculations of the work to be performed. But even assuming the figures and levels of the author, it would hardly be possible to execute works of such gigantic proportions without a great sacrifice of life. It was true that Chagres and Greytown were the two most unhealthy places in Central America, (and, perhaps, even in the world, 400 out of 600 of the Irish workmen employed on the Panama railway having died in three years, and H. M. S. *Rusmond* having lost more men in six months, off Greytown, than during a three years' station on the West Coast of Africa); but the valley of the Atrato was also very unhealthy, as was evidenced by the state in which Capt. Kennish returned, after his exploration. If the necessity for a tunnel was granted, then other places might be found more advantageous for inter-oceanic communication; and Darien presented greater facilities.

Another objection to the proposed route, was the great length of the canal, entailing the employment of steamships, which would be found more expensive than trans-shipment by the Panama railroad. Particulars were given of the height of the range of mountains running through Central America, more especially opposite Port Escoscos: the summit level was stated to vary between 950 and 1,150 feet, and the apex of the ridge, or backbone, of the Andes, to be so narrow as not to allow of more than five men walking abreast, even supposing it to be cleared of trees. But the chain of the Andes had not been sufficiently examined, to ascertain whether or not it was unbroken between the Napipi, where the depression was found to be 300 or 400 feet; and the Panama railroad, of which the summit level was only 250 feet. This was a most desirable point to be assured of, before coming to any determination upon the best route; and it was also of great importance that the coast on both sides should be accurately surveyed, to fix upon good harbors, for it was next to impossible to create them; the maps and charts at present in use were not to be relied on. It was doubted, also, whether the traffic would ever repay the cost, for the route from England to Calcutta, or Hong Kong, was actually 600 miles longer by Panama, than by Cape Horn; although it was, of course, admitted, that the former route had the advantage of calmer seas and of the absence of wind, and that this was no argument against the American trade justifying such an expenditure.

The results of observations with the mountain barometer, were also given, showing that its variations constituted a regular tide, by a knowledge

of which calculations could be based with sufficient accuracy, for preliminary surveys, as they would never vary more than 10 feet from those obtained by sections run with instruments.

It was contended on the other hand, that Mr. Trautwine, Mr. Lane, Mr. Porter, and Captain Kennish, had all been furnished with proper instruments, and that the spirit level had been used for the survey of the whole length of the Atrato, and from the Pacific on the West, over the summit of the Andes, down to the river Truando on the eastern side,—that Captain Kennish was thoroughly qualified for the task he had undertaken; and that the five different surveys, which had been undertaken at different times, and by different persons, all agreed in their results. It was admitted that the whole of Central America was very unhealthy; but it was stated that the proposed route was less so than the Isthmus proper. It was submitted that these were not the questions at issue, but whether a practicable route could be made between the two oceans by the valley of the Atrato, and whether sufficient evidence had been shown to authorize an official survey.

A letter was read, addressed by Baron Von Humboldt, to Mr. Kelley, (after examining the maps and plans,) expressing great confidence in the survey made and levels taken by Mr. Kennish, and his predecessors. The large number of maps and sections taken on so large a scale furnished all the elements necessary for forming an opinion of a possibility of a communication through the mouths of the Atrato, by the Truando, and by a canal to the Pacific. The failure of the expedition in 1852, and subsequently, for exploring the mountainous country between the Gulf of San Miguel and Caledonia Bay, might be ascribed to the want of such plans.

Humboldt expressed an opinion that a free and open discussion would demonstrate the relative advantages and disadvantages of each proposed locality, and there would really be little difficulty in tracing the proper route, wherever there were good plans and sections, such as had been made under Mr. Kelley's directions, of the valley of the Atrato; his opinion in favor of that route, as compared with all the others, had always been strongly expressed; and in his works, he had even given all the details he had collected relative to the small canal stated to have been made in the year 1778 by the Indians, under the direction of a monk, the Cure of Novita, in order to unite the waters of the river Raspadura with those of the river San Juan, and thus establish a water communication for canoes across the Isthmus. He alluded also to the labors of Captain Fitzroy, R. N., who had in his report, on the Isthmus of Central America, descended on all the known routes; and he recalled the statement of Lieutenant Wood, R. N., when surveying the coast, to the effect that he traveled on foot, with native guides, from Cupica to the Napipi, in which he bathed, and returned to his ship within six hours, and that the most elevated ground passed over, did not exceed 300 or 400 feet. In fact, Humboldt looked upon the proposition of forming an inter-oceanic canal, by the valley of the Atrato, as perfectly feasible; and he even added, "without locks, or, if possible, without tunnels."

It was due to Mr. Kelley to state, that he did not appear as the agent of any other persons; but that he had caused these various surveys to be made solely at his own cost, and that he had already expended large sums, for the prosecution of these investigations which were carried on under his direct suggestions. In further explanation of Mr. Kelley's views, it was stated that originally he had been favorable to the route by the Atrato and the Raspadura, but subsequently, he became convinced that the route by the river Truando, to Humboldt Bay, would be preferable. He had, therefore, instructed Mr. Kennish and Mr. Lane, to survey that part of the country, and the result had been that the latter route was the one that he at present recommended. He was, however, by no means, prejudiced in favor of any

one particular route. His anxiety was, that very accurate and extensive surveys of these districts should be made, under the auspices of the Governments of Great Britain, France, and the United States; and he believed that part of the Isthmus would be found to present more favorable features than any other. With regard to the river Atrato, it was mentioned that it was only to be compared in magnitude with the largest of the American rivers, and was known to be navigable for the largest ships as far as beyond the junction with the Napipi. It would, therefore, not require any change below that point, and the nature of the climate was such as to preclude the probability of the supply of water failing at any season. It also drained the whole valley, in which rain fell for nine or ten months in the year; besides which, it received a number of rivers, some of which were of equal size with those of the Truando, the current of which it was proposed to reverse, so as to turn the water of the upper part of the Atrato, into the channel of the Truando, and thence into the Pacific.

Although the mean level of the two oceans was generally agreed to be the same, yet in the northern and narrowest parts of the Bay of Panama the tide rose 20 or 30 feet, whilst at Humboldt Bay, to the South, it did not rise more than 12 ft. The high tide level at this latter point, was, therefore, nearly on a level with the junction of the Truando and the Atrato—so that the current would not be so great as to prevent navigation or to damage the works in the channel, as it had been contended would be the case, if a canal were made across the narrow part of the Isthmus where the lift of the tide was greater.

In concluding the discussion, it was stated that the Institution was very much indebted to Mr. Kelley for the paper he had brought forward. It gave a clearer insight than any of its predecessors, into the difficulties of the whole problem of an inter-oceanic canal, and it suggested a route which possessed greater facilities than any other that had been proposed. The English, French, and United States Governments, entertained enlightened and enlarged views on the subject, and it was believed, that at the proper moment they would lend their strenuous aid in furtherance of this great question, so important to the commercial and political interest of the world.—*London Artisan, June, 1858.*

Terre Haute and Alton Railroad.

The *Alton Courier* says: "The business of the Terre Haute and Alton road is steadily increasing, especially in freight, which is to the full extent and capacity of the rolling stock. Recent advices from the West also indicate a large increase during the present over any preceding month. The earnings for July were about \$60,000. This road traverses perhaps the most beautiful agricultural portion of Illinois, passing through the county towns of several of the first counties of that State. It has been but recently opened for operation over the entire line, from Terre Haute to the Mississippi river, which it strikes both at Alton and St. Louis." The short time, however, that it has been operated, showed a large local business. It also affords the most direct route from the seaboard to St. Louis for through freights and travel, which must, as the busy season approaches, increase rapidly."

Great Southern Railroad.

We have the proud satisfaction of recording this morning the complete success of the arrangement recently entered into by certain parties in this city, for the control of the Southern Railway along the shore of Lake Erie, from Niagara Falls to Amherstburgh. The annual meeting for the election of Directors was held at Amherstburgh yesterday, and resulted in the election of a Board, which gives to this city the entire control of the line. The main object has thus been accomplished, and it now only remains for the Great Western Railway Company and the business men of Hamilton, to put forward a strenuous effort for the completion of the Southern road in connection with

the Hamilton and Port Dover Railway.—*Hamilton Spectator.*

The Projected Suez Ship Canal.

The European Commission of Engineers, assembled in Paris to discuss the details of the plan for cutting a canal across the Isthmus of Suez, have brought their labors to a close. The following is a summary statement of the resolutions agreed upon at the various sittings:

1. The commission have rejected the system of indirect tracts across Egypt, and have adopted the principle of a direct cutting from Suez to the Mediterranean.

2. They have rejected the system of supplying the maritime canal from the fresh water of the Nile, and have adopted that which supplies it with sea-water.

3. They have discussed the advantages and inconveniences of a canal, with continuous embankments, from one sea to the other; and at the close of this discussion it was decided that the canal should not be embanked in its passage across the Bitter Lakes.

4. The effect of the interposition of the Bitter Lakes, thus left open to the waters of the canal, being to neutralize the tidal currents, the commission have considered that the locks proposed at each end of the canal, at Suez and Pelusium, would not be indispensable. They have left it open, however, to establish these locks at a future period, should they be judged necessary.

5. It has confirmed the breadth of 100 metres (328 ft.) at the water line, and 66 metres (207 ft.) at the bottom, throughout the main course of the canal; for the portion, 20 kilometres (12½ miles) in length, between Suez and the Bitter Lakes, which is to be lined with stone, the breadth is reduced to 80 metres at the water lines (262 feet), and 48 metres (156 feet) at the bottom.

6. The section of the precursory scheme drawn up by the Viceroy's engineers is in other respects maintained.

7. As regards the entrance into the Mediterranean, to be called Port Said, the commission adopt the plan of jetties proposed by those of its members who proceeded to Egypt, with the exception that the breadth of the channel will be 400 metres, or 1,312 feet, instead of 500 metres, (1,640 feet), and an inner basin will be added.

8. As regards the port of Suez, on the Red Sea, the commission adopt the situation and direction given to the channel. The breadth will be 300 metres, (984 feet,) instead of 400, and an inner basin will be added. The jetties will terminate at a depth of six metres (19 ft. 8 in.), low water, and a broad channel in the direction of the jetties will be dredged to a depth of nine metres (29½ feet 9 in.)

9. The commission declare that beacon lights of the first order will have to be established to point out shoals on the Egyptian coast and on the shores of the Red Sea, as a necessary consequence of opening the canal.

10. A port for taking in stores and refitting will be created in Lake Menzaleh.

11. As regards the auxiliary canals supplied with fresh water from the Nile, while the commission prefer, in a technical point of view, the plan of a canal from Zagazig, near Bilbie, they leave the choice of the best mode of executing it to the judgment of the engineers to whom the works will be entrusted.

12. Lastly, from the detailed information given by the naval officers, members of the commission, it is established that the navigation of the Red Sea is as favorable as that of the Mediterranean and the Adriatic. This was the substance of the opinion given to the commission by Captain Harris, who has performed seventy voyages from Suez to India.

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August, 9, 1856.

3m

TO BRIDGE BUILDERS.

THE La Crosse and Milwaukee Railroad Company invites PROPOSALS with plans and specifications, until Wednesday noon, October 15th next, for building a bridge over the Wisconsin river on the line of their road. This road extends in a north-westerly direction, across the State, from Milwaukee on Lake Michigan to La Crosse on the Mississippi river, crossing the Wisconsin river at Kilbourn City in Columbia county. The river at this point runs in a rocky bed, the banks of which are vertical rock bluffs to the height of 80 feet above the water, at which point they are at the grade line of the road, and about 300 feet apart. The water is about 20 feet deep, having in the middle of the stream a few feet of sand overlying the rock bottom. It is proposed to erect two piers about 50 feet from either bank, at which points the water is about 5 feet deep at low water, with a clean rock bottom, giving a span in the middle of 200 feet, and two short spans at the ends, resting upon the natural rocks as abutments. It is desirable so to construct the bridge as to give a wagon way below the railroad track, passing the latter over the higher section of the bridge. The company reserve the right to award the contract to any parties on any plan furnished; but in case of their giving the contract to any builder on a plan furnished by any other person, they will pay to the person furnishing such plan, the sum of FIVE HUNDRED DOLLARS in full consideration of the plan and specifications so adopted.

BYRON KILBOURN.

Pres't LaC. and Mil. R. R. Co.

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10:32

SALE OF THE

Syracuse & Binghamton R.R.

SUPREME COURT.—David Hoadley & Horace White, Trustees for the First Mortgage Bondholders of the Syracuse and Binghamton Railroad Company, against the Syracuse and Binghamton Railroad Company and others.

In pursuance of a judgment of foreclosure and sale, entered in this action on the first day of August, 1856, there will be sold by me, or under my direction, at the Syracuse House, in the city of Syracuse, on the 20th day of September, 1856, at 10 o'clock in the forenoon, "All and singular the corporate property and franchises of the said Syracuse and Binghamton Railroad Company, consisting of all the lands, tracks, lines, rails, bridges, ways, buildings, piers and wharfs, erections, fences, walls, fixtures, privileges, franchises, rights and real estate whatsoever, and all the tolls, income, issues and profits to be had from the same, and all the railway depots or stations, with the buildings thereon, together with all the locomotives, tenders, cars, carriages, tools and machinery owned by said Syracuse and Binghamton Railroad Company, or any way belonging or appertaining to said road and used thereon, between the city of Syracuse and village of Binghamton, including 13 locomotive engines, tenders and fixtures, 10 locomotive lamps, 10 first class passenger cars, 3 second class passenger cars, 2 mail baggage and express cars, 8 baggage cars, with stoves and lamps in each, 80 box cars, 34 platform cars, 40 gravel cars, 8 hand cars, 1 large snow plow; also one stationary engine and boiler, 2 lathes, 1 wheel press, 1 upright drill, 40 feet line shafting, 8 bands and pulleys for same, 3 forges and bellows, 3 anvils and all the tools in the shop at Syracuse, and along the line of said road, and materials on hand for repairs and use of said road; also 80 tons of iron rails, 20 tons of railroad chairs, 10 tons of rail spikes, 10 frogs, 8,000 cords of wood at various points along the line of said road, 12 hand trucks, 8 platform scales, 19 stoves, and all the furniture, books and blanks at the several stations and buildings along the line of said road; 120 lamps of various kinds, in use on trains, at stations, shops, and switches along the line of said road; also, the office furniture, consisting of two large desks, two tables and cases of pigeon holes, 3 iron safes, one draughting table, one case of drawers, 4 stoves, one ticket case and tickets in same, one regulator, sundry blanks, blank books and stationery for use of said Company."

A more complete inventory of property and description of premises to be sold, together with the maps and profiles, will be exhibited on the day of sale, and also the terms of sale will then and there be made known. Dated August 4th, 1856.

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Drawings in detail accurately defining the style and character of engines and appurtenances to be submitted by the proposers, with description.

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On and after Thursday, August 7, 1886, and until further notice,

PASSENGER TRAINS
will leave Pier foot of Duane street,
as follows, viz:—

BUFFALO EXPRESS, at 6 a.m., for Buffalo.
DUNKIRK EXPRESS, at 6 a.m. for Dunkirk.
MAIL, at 8 1/2 a.m. for Dunkirk and Buffalo, and intermediate stations.—Passengers by this train will remain over night at Owego, and proceed the next morning.
CHICAGO EXPRESS, at 1 p.m. for Dunkirk.
ROCKLAND PASSENGER, at 3 1/2 p.m., (from foot of Chambers st.) via Piermont, for Suffern's and intermediate stations.
WAY PASSENGER, at 4 p.m., for Newburgh and Middletown and intermediate stations.
NIGHT EXPRESS, at 5 p.m. for Dunkirk and Buffalo.
EXTORTANT, at 6 p.m., for Dunkirk and Buffalo and intermediate stations.

The above trains run daily, Sundays excepted.

These Express Trains connect at Elmira, with the Elmira, Canandaigua and Niagara Falls Railroad, for Niagara Falls; at Binghamton with the Syracuse and Binghamton Railroad, for Syracuse; at Corning with Buffalo, Corning and New York Railroad, for Rochester; at Great Bend with Delaware, Lackawanna and Western Railroad, for Scranton; at Buffalo and Dunkirk with the Lake Shore Railroad for Cleveland, Cincinnati, Toledo, Detroit, Chicago, etc.,
D. C. McCALLUM, General Supt.

NEW YORK
IRON PAVEMENT
AND
STREET RAILWAY CO.

Office Nos. 8 and 10 Wall st.,
ROOM 16.

TO THE
MUNICIPAL AUTHORITIES OF THE SEVERAL
CITIES OF THE UNITED STATES,
AND TO
RAILROAD COMPANIES

AND OTHERS INTERESTED.

THE above-named Company, established in the City of New York, offer you in

ROBINSON'S IRON PAVEMENT.

1st. The cheapest pavement ever used, because most enduring at least cost of repair.

2d. The safest pavement for either man or beast to travel on.
3d. The most economical pavement, because the wear and tear of both beasts and vehicles, of pleasure and burthen, are less upon it than upon any other in use.

4th. The most beautiful pavement to look upon, because the most cleanly and variegated, and free from dust.

5th. The easiest and least tiresome pavement to ride upon, because most even of surface.

6th. The least noisy pavement to use or reside near.

7th. The best pavement ever used, everything desirable considered.

This Company is enabled to furnish cities and others with an Iron Pavement for every use, at a reduced price. They will contract to lay it down upon any graded street, of superior strength, beauty, and perfection to that recently laid down in Boston, or that in Nassau street, fronting the Post Office, in this city, for

\$5 to \$6.50 PER SUPERFICIAL YARD,

in substitution for any existing pavement. This price is over \$4 per square yard less than the first laid down in Boston cost that city; AND \$1 LESS PER YARD THAN THAT RECENTLY LAID DOWN IN BOSTON COST; AND IS \$1 PER SQUARE YARD LESS THAN THE RUSS PAVEMENT HAS COST, that has so beautified, yet rendered most dangerous and expensive to man, and beast, and vehicle, a large extent of Broadway, and some other streets of New York city.

This pavement is also the best and cheapest for all railroad tracks, where horses are employed, and for all highway railroad crossings, now usually made of plank, which are subject to constant disorder and repair.

Lighter and less expensive patterns (averaging from \$1 TO \$3 PER YARD) are furnished for walks in public parks and grounds, also for side walks, private lanes, yards, foot-ways, cellars, and approaches to stables—each being most permanent, cleanly, and ornamental.

In every case ENTIRE SATISFACTION WILL BE GUARANTEED to all purchasers with whom contracts shall be made for laying down this pavement.

FOR A SMALL ANNUAL PER CENTAGE ON THE COST OF LAYING DOWN, CONTRACTS WILL ALSO BE MADE FOR KEEPING THIS PAVEMENT IN REPAIR FIVE, TEN, OR TWENTY YEARS, OR EVEN FOR A LONGER PERIOD.

The municipal authorities of cities, and directors of railroad companies, and all enterprising citizens who wish to blend utility with embellishment of their private grounds, residences, &c., are specially invited to investigate this subject. The surpassing usefulness of the Iron Pavement has been too well established in the public streets of Boston as well as in a section of Nassau street, in this city, to require experiment or argument to uphold it.

All additional information that may be desired will be promptly communicated, and orders promptly executed, by letter or in person, to the undersigned, GENERAL MANAGERS OF THE COMPANY'S BUSINESS, AT THEIR OFFICE IN THIS CITY, NOS. 8 AND 10 WALL STREET.

We are also allowed to refer for general information on the subject, to the gentlemen whose names are subjoined, as Honorary and Consulting Directors, not interested as shareholders in the Company's business.

SMITH, ELEVETH & ROBINSON,
General Managers for the Iron Pavement
and Street Railway Company

HONORARY AND CONSULTING DIRECTORS.

HON. B. B. FRENCH, Washington, D. C.
CHARLES MONROE, Esq., Baltimore, Md.
DAVID BURBANK, Esq., Detroit, Mich.
JOHN J. SPEED, Esq., Mayor of Boston, Mass.
L. L. SADLER, Esq., Treasurer of Union Telegraph Company, Boston, Mass.
HON. H. F. FRENCH, Associate Judge, Superior Court, Exeter, N. H.
HON. JOHN M. WOOD, (Member of Congress,) Portland, Me.